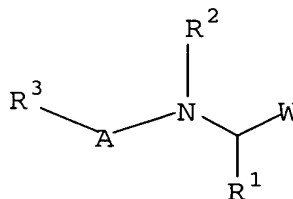


5 What we claim is:

1. A compound of Formula (I):



(I)

10 or a stereoisomer or a pharmaceutically acceptable salt form or prodrug thereof, wherein:

W is selected from the group:

- B(Y<sup>1</sup>)(Y<sup>2</sup>),
- 15 -C(=O)C(=O)-Q,
- C(=O)C(=O)NH-Q,
- C(=O)C(=O)-O-Q,
- C(=O)CF<sub>2</sub>C(=O)NH-Q;
- C(=O)CF<sub>3</sub>,
- 20 -C(=O)CF<sub>2</sub>CF<sub>3</sub>, and
- C(=O)H;

Y<sup>1</sup> and Y<sup>2</sup> are independently selected from:

- a) -OH,
- 25 b) -F,
- c) -NR<sup>4</sup>R<sup>5</sup>,
- d) C<sub>1</sub>-C<sub>8</sub> alkoxy, and

when taken together with B, Y<sup>1</sup> and Y<sup>2</sup> form:

- e) a cyclic boronic ester where said cyclic boronic ester contains from 2 to 20 carbon atoms, and, optionally, 1, 2, or 3 heteroatoms which can be N, S, or O;
- 30 f) a cyclic boronic amide where said cyclic boronic amide contains from 2 to 20 carbon atoms and, optionally, 1, 2, or 3 heteroatoms which can be N, S, or O; or
- 35

- 5 g) a cyclic boronic amide-ester where said cyclic boronic amide-ester contains from 2 to 20 carbon atoms and, optionally, 1, 2, or 3 heteroatoms which can be N, S, or O;
- 10 Q is selected from  $-(CR^6R^{6c})_p-Q^1$ ,  $-(CR^6R^{6c})_p-Q^2$ ,  $C_2-C_4$  alkenyl substituted with  $Q^1$ ,  $C_2-C_4$  alkynyl substituted with  $Q^1$ , and an amino acid residue;
- 15 p is 1, 2, 3 or 4;
- $Q^1$  is selected from the group:  
- $CO_2R^7$ , - $SO_2R^7$ , - $SO_3R^7$ , - $P(O)_2R^7$ , - $P(O)_3R^7$ ,  
aryl substituted with 0-4  $Q^{1a}$ , and  
20 5-6 membered heterocyclic ring system consisting of carbon atoms and 1-4 heteroatoms selected from the group: O, S, and N; optionally saturated, partially unsaturated or unsaturated; and said 5-6 membered heterocyclic ring system is substituted with 0-4  
25  $Q^{1a}$ ;
- $Q^{1a}$  is H, F, Cl, Br, I, - $NO_2$ , -CN, -NCS, - $CF_3$ , - $OCF_3$ ,  
- $CO_2R^8$ , - $C(=O)NR^8R^9$ , - $NHC(=O)R^8$ , - $SO_2R^8$ , - $SO_2NR^8R^9$ ,  
- $NR^8R^9$ , - $OR^8$ , - $SR^8$ ,  $C_1-C_4$  alkyl,  $C_1-C_4$  haloalkyl, or  
30  $C_1-C_4$  haloalkoxy;
- $Q^2$  is  $-X^1-NR^{10}-Z$ ,  $-NR^{10}-X^2-Z$ , or  $-X^1-NR^{10}-X^2-Z$ ;
- $X^1$  and  $X^2$  are independently selected from: - $C(=O)-$ , -S-,  
35 - $S(=O)-$ , - $S(=O)_2-$ , - $P(O)-$ , - $P(O)_2-$ , and - $P(O)_3-$ ;
- Z is  $C_1-C_4$  haloalkyl,  
 $C_1-C_4$  alkyl substituted with 0-3  $Z^a$ ,  
 $C_2-C_4$  alkenyl substituted with 0-3  $Z^a$ ,

- 5 C<sub>2</sub>-C<sub>4</sub> alkynyl substituted with 0-3 Z<sup>a</sup>,  
C<sub>3</sub>-C<sub>10</sub> cycloalkyl substituted with 0-5 Z<sup>b</sup>,  
C<sub>3</sub>-C<sub>10</sub> carbocycle substituted with 0-5 Z<sup>b</sup>,  
6-10 membered aryl substituted with 0-5 Z<sup>b</sup>, or  
5-10 membered heterocyclic ring system consisting of  
10 carbon atoms and 1-4 heteroatoms selected from the  
group: O, S, and N; optionally saturated, partially  
unsaturated or unsaturated; and said 5-10 membered  
heterocyclic ring system is substituted with 0-4  
Z<sup>b</sup>;
- 15 Z<sup>a</sup> is H, F, Cl, Br, I, -NO<sub>2</sub>, -CN, -NCS, -CF<sub>3</sub>, -OCF<sub>3</sub>,  
-CO<sub>2</sub>R<sup>8</sup>, -C(=O)NR<sup>8</sup>R<sup>9</sup>, -NHC(=O)R<sup>8</sup>, -NR<sup>8</sup>R<sup>9</sup>, -OR<sup>8</sup>, -SR<sup>8</sup>,  
-S(=O)R<sup>8</sup>, -SO<sub>2</sub>R<sup>8</sup>, -SO<sub>2</sub>NR<sup>8</sup>R<sup>9</sup>, C<sub>1</sub>-C<sub>4</sub> alkyl,  
C<sub>1</sub>-C<sub>4</sub> haloalkyl, C<sub>1</sub>-C<sub>4</sub> haloalkoxy,
- 20 C<sub>3</sub>-C<sub>7</sub> cycloalkyl substituted with 0-5 Z<sup>b</sup>,  
C<sub>3</sub>-C<sub>10</sub> carbocycle substituted with 0-5 Z<sup>b</sup>,  
6-10 membered aryl substituted with 0-5 Z<sup>b</sup>, or  
5-10 membered heterocyclic ring system consisting of  
carbon atoms and 1-4 heteroatoms selected from the  
25 group: O, S, and N; optionally saturated, partially  
unsaturated or unsaturated; and said 5-10 membered  
heterocyclic ring system is substituted with 0-4  
Z<sup>b</sup>;
- 30 Z<sup>b</sup> is H, F, Cl, Br, I, -NO<sub>2</sub>, -CN, -NCS, -CF<sub>3</sub>, -OCF<sub>3</sub>,  
-CO<sub>2</sub>R<sup>8</sup>, -C(=O)NR<sup>8</sup>R<sup>9</sup>, -NHC(=O)R<sup>8</sup>, -NR<sup>8</sup>R<sup>9</sup>, -OR<sup>8</sup>, -SR<sup>8</sup>,  
-S(=O)R<sup>8</sup>, -SO<sub>2</sub>R<sup>8</sup>, -SO<sub>2</sub>NR<sup>8</sup>R<sup>9</sup>, C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub>  
haloalkyl, C<sub>1</sub>-C<sub>4</sub> haloalkoxy,
- 35 C<sub>3</sub>-C<sub>7</sub> cycloalkyl substituted with 0-5 Z<sup>c</sup>,  
C<sub>3</sub>-C<sub>10</sub> carbocycle substituted with 0-5 Z<sup>c</sup>,  
6-10 membered aryl substituted with 0-5 Z<sup>c</sup>, or  
5-10 membered heterocyclic ring system consisting of  
carbon atoms and 1-4 heteroatoms selected from the

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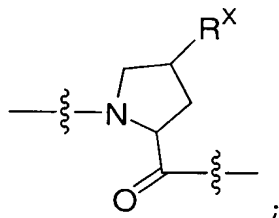
5 group: O, S, and N; optionally saturated, partially unsaturated or unsaturated; and said 5-10 membered heterocyclic ring system is substituted with 0-4  $Z^C$ ;

10  $Z^C$  is H, F, Cl, Br, I,  $-NO_2$ ,  $-CN$ ,  $-NCS$ ,  $-CF_3$ ,  $-OCF_3$ ,  $-CO_2R^8$ ,  $-C(=O)NR^8R^9$ ,  $-NHC(=O)R^8$ ,  $-NR^8R^9$ ,  $-OR^8$ ,  $-SR^8$ ,  $-S(=O)R^8$ ,  $-SO_2R^8$ ,  $-SO_2NR^8R^9$ ,  $C_1-C_4$  alkyl,  $C_1-C_4$  haloalkyl, or  $C_1-C_4$  haloalkoxy;

15 A is  $A^2-A^3$ ,  $A^2-A^3-A^4$ ,  $A^2-A^3-A^4-A^5$ ,  $A^2-A^3-A^4-A^5-A^6$ , or  $A^2-A^3-A^4-A^5-A^6-A^7$ ;

$A^2$  is a natural amino acid, a modified amino acid, an unnatural amino acid, or

20



wherein said amino acid is of either D or L configuration;

25  $R^X$  is H, F, Cl, Br, I,  $-CF_3$ ,  $-OCF_3$ ,  $-(CH_2)_m-R^{16}-(CH_2)_n-R^{12}$ , or  $-CO_2R^{12}$ ;

m and n are independently selected from 0, 1, 2, and 3;

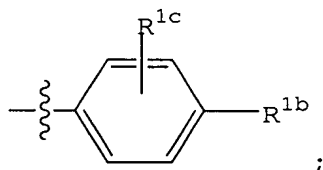
30  $A^3$ ,  $A^4$ ,  $A^5$ ,  $A^6$ , and  $A^7$  are independently selected from an amino acid residue; wherein said amino acid residue, at each occurrence, is independently selected from a natural amino acid, a modified amino acid, or an unnatural amino acid; wherein said natural, modified  
35 or unnatural amino acid is of either D or L configuration;

5

$R^1$  is  $-\text{CH}_2\text{CH}_2-\text{R}^{1a}$ ,  $-\text{CH}_2\text{CH}_2\text{CH}_2-\text{R}^{1a}$ ,  $-\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2-\text{R}^{1a}$ ,  
 $-\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2-\text{R}^{1a}$ ,  $-\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2-\text{R}^{1a}$ ,  
 $-\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_3$ ,  $-\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_3$ ,  
 $-\text{CH}_2\text{CH}_2\text{CH}_2\text{C}(\text{CH}_3)_2$ ,  $-\text{CH}_2\text{CH}_2\text{CH}_2\text{C}(\text{CH}_2\text{CH}_3)_2$ , or  
 $-\text{CH}_2\text{CH}_2\text{CH}_2$ -cyclobutyl;

10

$R^{1a}$  is



15

$R^{1b}$  is selected at each occurrence from the group:  
H,  $\text{C}_1$ - $\text{C}_4$  alkyl, F, Cl, Br, I,  $-\text{OH}$ ,  $\text{C}_1$ - $\text{C}_4$  alkoxy,  
phenoxy, benzyloxy,  $-\text{SH}$ ,  $-\text{CN}$ ,  $-\text{NO}_2$ ,  $-\text{C}(=\text{O})\text{OR}^{1d}$ ,  
 $-\text{NR}^{1d}\text{R}^{1d}$ ,  $-\text{CF}_3$ ,  $-\text{OCF}_3$ ,  $\text{C}_3$ - $\text{C}_6$  cycloalkyl, and aryl  
substituted by 0-3  $R^{1c}$ ;

20

$R^{1c}$  is selected at each occurrence from the group:  
methyl, ethyl, Cl, F, Br, I, OH, methoxy, ethoxy,  $-\text{CN}$ ,  
 $-\text{NO}_2$ ,  $-\text{C}(=\text{O})\text{OR}^{1d}$ ,  $\text{NR}^{1d}\text{R}^{1d}$ ,  $-\text{CF}_3$ , and  $-\text{OCF}_3$ ;

25

$R^{1d}$  is H,  $\text{C}_1$ - $\text{C}_4$  alkyl, phenyl or benzyl;

$R^2$  is H,  $\text{C}_1$ - $\text{C}_4$  alkyl, aryl, aryl( $\text{C}_1$ - $\text{C}_4$  alkyl)-, or  
 $\text{C}_3$ - $\text{C}_6$  cycloalkyl;

30

$R^3$  is H,  $\text{C}_1$ - $\text{C}_4$  alkyl, aryl, aryl( $\text{C}_1$ - $\text{C}_4$  alkyl)-,  $-\text{C}(=\text{O})\text{R}^{11}$ ,  
 $-\text{CO}_2\text{R}^{11}$ ,  $-\text{C}(=\text{O})\text{NHR}^{11}$ ,  $-\text{S}(=\text{O})\text{R}^{11}$ ,  $-\text{S}(=\text{O})_2\text{R}^{11}$ , or  
an  $\text{NH}_2$ -blocking group;

35

$R^4$  and  $R^5$ , are independently selected from: H,  $\text{C}_1$ - $\text{C}_4$  alkyl,  
aryl( $\text{C}_1$ - $\text{C}_4$  alkyl)-, and  $\text{C}_3$ - $\text{C}_7$  cycloalkyl;

5  $R^6$  is selected from the group: H,  $-\text{CO}_2R^7$ ,  $-\text{NR}^7R^7$ , and  $\text{C}_1\text{-C}_6$   
alkyl substituted with 0-1  $R^{6a}$ ;

$R^{6a}$  is selected from the group: halo,  $-\text{NO}_2$ ,  $-\text{CN}$ ,  $-\text{CF}_3$ ,  
 $-\text{CO}_2R^7$ ,  $-\text{NR}^7R^7$ ,  $-\text{OR}^7$ ,  $-\text{SR}^7$ ,  $-\text{C}(=\text{NH})\text{NH}_2$ , and aryl  
10 substituted with 0-1  $R^{6b}$ ;

$R^{6b}$  is selected from the group:  $-\text{CO}_2\text{H}$ ,  $-\text{NH}_2$ ,  $-\text{OH}$ ,  $-\text{SH}$ , and  
 $-\text{C}(=\text{NH})\text{NH}_2$ ;

15  $R^{6c}$  is H or  $\text{C}_1\text{-C}_4$  alkyl;

$R^7$  at each occurrence is independently selected from the  
group: H,  $\text{C}_1\text{-C}_4$  alkyl, aryl, and aryl( $\text{C}_1\text{-C}_4$  alkyl)-,  
wherein aryl is optionally substituted with 0-3  
20 substituents selected from  $-\text{CH}_3$ ,  $-\text{NO}_2$ ,  $-\text{CN}$ ,  $-\text{OH}$ ,  
 $-\text{OCH}_3$ ,  $-\text{SO}_2\text{CH}_3$ ,  $-\text{CF}_3$ , Cl, Br, I, and F;

alternatively,  $-\text{NR}^7R^7$  may optionally form a 5-6 membered  
heterocycle consisting of carbon atoms, a nitrogen  
25 atom, and optionally a second heteroatom selected from  
the group: O, S, and N;

$R^8$  and  $R^9$  are independently selected from H,  $\text{C}_1\text{-C}_4$  alkyl,  
aryl, aryl( $\text{C}_1\text{-C}_4$  alkyl)-, and  $\text{C}_3\text{-C}_7$  cycloalkyl;

30

alternatively,  $\text{NR}^8R^9$  may form a 5-6 membered heterocycle  
consisting of carbon atoms, a nitrogen atom, and  
optionally a second heteroatom selected from the  
group: O, S, and N;

35

$R^{10}$  is selected from the group: H,  
 $\text{C}_1\text{-C}_4$  alkyl substituted with 0-3  $R^{13}$ ,  
 $\text{C}_3\text{-C}_{10}$  carbocycle substituted with 0-3  $R^{13}$ ,  
6-10 membered aryl substituted with 0-3  $R^{13}$ , and

5        5-10 membered heterocyclic ring system consisting of  
carbon atoms and 1-4 heteroatoms selected from the  
group: O, S, and N; optionally saturated, partially  
unsaturated or unsaturated; said 5-10 membered  
heterocyclic ring system is substituted with 0-3  
10        R<sup>13</sup>;

R<sup>11</sup> is C<sub>1</sub>-C<sub>4</sub> alkyl substituted with 0-1 R<sup>11a</sup>,  
6-10 membered aryl substituted with 0-2 R<sup>11b</sup>, or  
5-10 membered heterocyclic ring system consisting of  
15        carbon atoms and 1-4 heteroatoms selected from the  
group: O, S, and N; optionally saturated, partially  
unsaturated or unsaturated; said 5-10 membered  
heterocyclic ring system is substituted with 0-2  
R<sup>11b</sup>;

20        R<sup>11a</sup> is C<sub>1</sub>-C<sub>4</sub> alkyl, halogen, -OR<sup>14</sup>, -SR<sup>14</sup>, -NR<sup>14</sup>R<sup>15</sup>, aryl,  
or a 5-6 membered heterocyclic ring system containing  
1, 2 or 3 heteroatoms selected from nitrogen, oxygen  
and sulfur;

25        R<sup>11b</sup> is -NO<sub>2</sub>, -NH<sub>2</sub>, -SO<sub>3</sub>H, -SO<sub>2</sub>CH<sub>3</sub>, -CO<sub>2</sub>H, -CF<sub>3</sub>, -OH, -SH,  
-OCF<sub>3</sub>, Cl, Br, I, F, =O, C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> alkoxy, C<sub>1</sub>-  
C<sub>4</sub> thioalkoxy, aryl, or aryl(C<sub>1</sub>-C<sub>4</sub> alkyl)-, wherein  
aryl is optionally substituted with 0-3 substituents  
30        selected from -CH<sub>3</sub>, -NO<sub>2</sub>, -CN, -OH, -OCH<sub>3</sub>, -SO<sub>2</sub>CH<sub>3</sub>,  
-CF<sub>3</sub>, Cl, Br, I, and F;

R<sup>12</sup> is selected from the group: H;  
C<sub>1</sub>-C<sub>6</sub> alkyl substituted with 0-3 R<sup>12a</sup>;  
35        C<sub>2</sub>-C<sub>6</sub> alkenyl substituted with 0-3 R<sup>12a</sup>;  
C<sub>2</sub>-C<sub>6</sub> alkynyl substituted with 0-3 R<sup>12a</sup>;  
C<sub>3</sub>-C<sub>7</sub> cycloalkyl substituted with 0-3 R<sup>12a</sup>;  
C<sub>4</sub>-C<sub>10</sub> (cycloalkyl-alkyl) substituted with 0-3 R<sup>12a</sup>;  
6-10 membered aryl substituted with 0-3 R<sup>12a</sup>; and

5 5-10 membered heterocyclic ring system consisting of  
carbon atoms and 1-4 heteroatoms selected from the  
group: O, S, and N; optionally saturated, partially  
unsaturated or unsaturated; said 5-10 membered  
heterocyclic ring system is substituted with 0-2  
10 R<sup>12a</sup>;

R<sup>12a</sup> is independently selected from the group: C<sub>1</sub>-C<sub>6</sub> alkoxy;  
lower thioalkyl; sulfonyl; -NO<sub>2</sub>; halogen; haloalkyl;  
carboxyl; carboxy(lower alkyl); -OR<sup>14</sup>; -SR<sup>14</sup>; -NR<sup>14</sup>R<sup>15</sup>;  
15 -C(=O)NR<sup>14</sup>R<sup>15</sup>; -NR<sup>14</sup>C(=O)R<sup>15</sup>; -S(=O)<sub>2</sub>R<sup>14</sup>;  
C<sub>1</sub>-C<sub>6</sub> alkyl substituted with 0-3 R<sup>12b</sup>;  
C<sub>2</sub>-C<sub>6</sub> alkenyl substituted with 0-3 R<sup>12b</sup>;  
C<sub>2</sub>-C<sub>6</sub> alkynyl substituted with 0-3 R<sup>12b</sup>;  
C<sub>3</sub>-C<sub>7</sub> cycloalkyl substituted with 0-3 R<sup>12b</sup>;  
20 C<sub>4</sub>-C<sub>10</sub> (alkylcycloalkyl) substituted with 0-3 R<sup>12b</sup>;  
6-10 membered aryl substituted with 0-3 R<sup>12b</sup>; and  
5-10 membered heterocyclic ring system consisting of  
carbon atoms and 1-4 heteroatoms selected from the  
group: O, S, and N; optionally saturated, partially  
25 unsaturated or unsaturated; said 5-10 membered  
heterocyclic ring system is substituted with 0-2  
R<sup>12b</sup>;

R<sup>12b</sup> is independently selected from the group: C<sub>1</sub>-C<sub>6</sub> alkyl;  
30 C<sub>3</sub>-C<sub>7</sub> cycloalkyl; C<sub>1</sub>-C<sub>6</sub> alkoxy; halogen; -OR<sup>14</sup>; -SR<sup>14</sup>;  
-NR<sup>14</sup>R<sup>15</sup>; -C(=O)NR<sup>14</sup>R<sup>15</sup>; -NR<sup>14</sup>C(=O)R<sup>15</sup>; -S(=O)<sub>2</sub>R<sup>14</sup>;  
-NO<sub>2</sub>; haloalkyl; carboxyl; carboxy(lower alkyl); aryl;  
and 5-10 membered heterocyclic ring system consisting  
of carbon atoms and 1-4 heteroatoms selected from  
35 the group: O, S, and N; optionally saturated,  
partially unsaturated or unsaturated; said 5-10  
membered heterocyclic ring system is substituted  
with C<sub>1</sub>-C<sub>6</sub> alkyl;



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- 5     $R^{13}$  at each occurrence is independently selected from the group: H,  $-\text{NO}_2$ ,  $-\text{SO}_2\text{OH}$ ,  $-\text{SO}_2\text{CH}_3$ ,  $-\text{CF}_3$ , Cl, Br, I, F,  $-\text{NH}_2$ ,  $-\text{NH}(\text{CH}_3)$ ,  $-\text{N}(\text{CH}_3)_2$ ,  $-\text{NH}(\text{CH}_2\text{CH}_3)$ ,  $-\text{N}(\text{CH}_2\text{CH}_3)_2$ , and  $\text{C}_1$ - $\text{C}_4$  alkyl;
- 10     $R^{14}$  and  $R^{15}$  are independently selected from the group: H,  $\text{C}_1$ - $\text{C}_4$  alkyl, aryl, aryl( $\text{C}_1$ - $\text{C}_4$  alkyl)-, and  $\text{C}_3$ - $\text{C}_7$  cycloalkyl;
- 15     $R^{16}$  is a bond,  $-\text{O}-$ ,  $-\text{S}-$  or  $-\text{NR}^{17}-$ ; and
- $R^{17}$  is H,  $\text{C}_1$ - $\text{C}_4$  alkyl, aryl, aryl( $\text{C}_1$ - $\text{C}_4$  alkyl)-, or  $\text{C}_3$ - $\text{C}_6$  cycloalkyl.
- 20    2. A compound of Claim 1, or a stereoisomer or a pharmaceutically acceptable salt form or prodrug thereof, wherein:
- W is  $-\text{B}(\text{Y}^1)(\text{Y}^2)$  or  $-\text{C}(=\text{O})\text{C}(=\text{O})\text{NH}-\text{Q}$ ;
- 25     $\text{Y}^1$  and  $\text{Y}^2$  are independently selected from:
- a)  $-\text{OH}$ ,
- b)  $-\text{F}$ ,
- c)  $-\text{NR}^4\text{R}^5$ ,
- d)  $\text{C}_1$ - $\text{C}_8$  alkoxy, and
- 30    when taken together with B,  $\text{Y}^1$  and  $\text{Y}^2$  form:
- e) a cyclic boronic ester where said cyclic boronic ester contains from 2 to 20 carbon atoms, and, optionally, 1, 2, or 3 heteroatoms which can be N, S, or O;
- 35    Q is selected from  $-(\text{CR}^6\text{R}^{6c})_p-\text{Q}^1$ ,  $\text{C}_2$ - $\text{C}_4$  alkenyl substituted with  $\text{Q}^1$ ,  $\text{C}_2$ - $\text{C}_4$  alkynyl substituted with  $\text{Q}^1$ , and an amino acid residue;

5

p is 1, 2 or 3;

Q<sup>1</sup> is selected from the group:

-CO<sub>2</sub>R<sup>7</sup>, -SO<sub>2</sub>R<sup>7</sup>, -SO<sub>3</sub>R<sup>7</sup>,

10

aryl substituted with 0-4 Q<sup>1a</sup>, and

5-6 membered heterocyclic ring system consisting of carbon atoms and 1-4 heteroatoms selected from the group: O, S, and N; optionally saturated, partially unsaturated or unsaturated; and said 5-6 membered heterocyclic ring system is substituted with 0-4 Q<sup>1a</sup>;

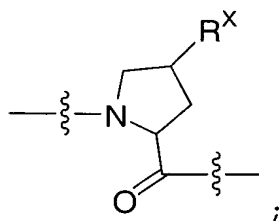
15

Q<sup>1a</sup> is H, F, Cl, Br, I, -NO<sub>2</sub>, -CN, -NCS, -CF<sub>3</sub>, -OCF<sub>3</sub>,  
-CO<sub>2</sub>R<sup>8</sup>, -C(=O)NR<sup>8</sup>R<sup>9</sup>, -NHC(=O)R<sup>8</sup>, -SO<sub>2</sub>R<sup>8</sup>, -SO<sub>2</sub>NR<sup>8</sup>R<sup>9</sup>,  
20 -NR<sup>8</sup>R<sup>9</sup>, -OR<sup>8</sup>, -SR<sup>8</sup>, C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> haloalkyl, or  
C<sub>1</sub>-C<sub>4</sub> haloalkoxy;

A is A<sup>2</sup>-A<sup>3</sup>, A<sup>2</sup>-A<sup>3</sup>-A<sup>4</sup>, A<sup>2</sup>-A<sup>3</sup>-A<sup>4</sup>-A<sup>5</sup>, or A<sup>2</sup>-A<sup>3</sup>-A<sup>4</sup>-A<sup>5</sup>-A<sup>6</sup>;

25

A<sup>2</sup> is a natural amino acid, a modified amino acid, an unnatural amino acid, or



30

wherein said amino acid is of either D or L configuration;

R<sup>X</sup> is H or -(CH<sub>2</sub>)<sub>m</sub>-R<sup>16</sup>-(CH<sub>2</sub>)<sub>n</sub>-R<sup>12</sup>;

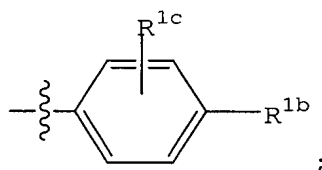
m and n are independently selected from 0, 1, or 2;

35

5 A<sup>3</sup>, A<sup>4</sup>, A<sup>5</sup>, and A<sup>6</sup> are independently selected from an amino  
acid residue wherein said amino acid residue, at each  
occurrence, is independently selected from a natural  
amino acid, a modified amino acid, or an unnatural  
amino acid wherein said natural, modified or unnatural  
10 amino acid is of either D or L configuration;

R<sup>1</sup> is -CH<sub>2</sub>CH<sub>2</sub>-R<sup>1a</sup>, -CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>-R<sup>1a</sup>, -CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>-R<sup>1a</sup>,  
-CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>-R<sup>1a</sup>, -CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>-R<sup>1a</sup>,  
-CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, -CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>,  
15 -CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>C(CH<sub>3</sub>)<sub>2</sub>, -CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>C(CH<sub>2</sub>CH<sub>3</sub>)<sub>2</sub>, or  
-CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>-cyclobutyl;

R<sup>1a</sup> is



20

R<sup>1b</sup> is selected at each occurrence from the group:  
H, C<sub>1</sub>-C<sub>4</sub> alkyl, F, Cl, Br, I, -OH, C<sub>1</sub>-C<sub>4</sub> alkoxy,  
phenoxy, benzyloxy, -SH, -CN, -NO<sub>2</sub>, -C(=O)OR<sup>1d</sup>,  
-NR<sup>1d</sup>R<sup>1d</sup>, -CF<sub>3</sub>, -OCF<sub>3</sub>, C<sub>3</sub>-C<sub>6</sub> cycloalkyl, and aryl  
25 substituted by 0-3 R<sup>1c</sup>;

R<sup>1c</sup> is selected at each occurrence from the group:  
methyl, ethyl, Cl, F, Br, I, OH, methoxy, ethoxy, -CN,  
-NO<sub>2</sub>, -C(=O)OR<sup>1d</sup>, NR<sup>1d</sup>R<sup>1d</sup>, -CF<sub>3</sub>, and -OCF<sub>3</sub>;

30

R<sup>1d</sup> is H, C<sub>1</sub>-C<sub>4</sub> alkyl, phenyl or benzyl;

R<sup>2</sup> is H, C<sub>1</sub>-C<sub>4</sub> alkyl, aryl, aryl(C<sub>1</sub>-C<sub>4</sub> alkyl)-, or  
C<sub>3</sub>-C<sub>6</sub> cycloalkyl;

35

R<sup>3</sup> is H, C<sub>1</sub>-C<sub>4</sub> alkyl, aryl, aryl(C<sub>1</sub>-C<sub>4</sub> alkyl)-, -C(=O)R<sup>11</sup>,

5        $-\text{CO}_2\text{R}^{11}$ ,  $-\text{C}(=\text{O})\text{NHR}^{11}$ ,  $-\text{S}(=\text{O})\text{R}^{11}$ ,  $-\text{S}(=\text{O})_2\text{R}^{11}$ , or  
an  $\text{NH}_2$ -blocking group;

$\text{R}^4$  and  $\text{R}^5$ , are independently selected from: H,  $\text{C}_1$ - $\text{C}_4$  alkyl,  
aryl( $\text{C}_1$ - $\text{C}_4$  alkyl)-, and  $\text{C}_3$ - $\text{C}_7$  cycloalkyl;

10

$\text{R}^6$  is selected from the group: H,  $-\text{CO}_2\text{R}^7$ ,  $-\text{NR}^7\text{R}^7$ , and  $\text{C}_1$ - $\text{C}_6$   
alkyl substituted with 0-1  $\text{R}^{6a}$ ;

15        $\text{R}^{6a}$  is selected from the group: halo,  $-\text{NO}_2$ ,  $-\text{CN}$ ,  $-\text{CF}_3$ ,  
 $-\text{CO}_2\text{R}^7$ ,  $-\text{NR}^7\text{R}^7$ ,  $-\text{OR}^7$ ,  $-\text{SR}^7$ ,  $-\text{C}(=\text{NH})\text{NH}_2$ , and aryl  
substituted with 0-1  $\text{R}^{6b}$ ;

$\text{R}^{6b}$  is selected from the group:  $-\text{CO}_2\text{H}$ ,  $-\text{NH}_2$ ,  $-\text{OH}$ ,  $-\text{SH}$ , and  
 $-\text{C}(=\text{NH})\text{NH}_2$ ;

20

$\text{R}^{6c}$  is H or  $\text{C}_1$ - $\text{C}_4$  alkyl;

$\text{R}^7$  at each occurrence is independently selected from the  
group: H,  $\text{C}_1$ - $\text{C}_4$  alkyl, aryl, and aryl( $\text{C}_1$ - $\text{C}_4$  alkyl)-,  
25       wherein aryl is optionally substituted with 0-3  
substituents selected from  $-\text{CH}_3$ ,  $-\text{NO}_2$ ,  $-\text{CN}$ ,  $-\text{OH}$ ,  
 $-\text{OCH}_3$ ,  $-\text{SO}_2\text{CH}_3$ ,  $-\text{CF}_3$ , Cl, Br, I, and F;

alternatively,  $-\text{NR}^7\text{R}^7$  may optionally form a 5-6 membered  
30       heterocycle consisting of carbon atoms, a nitrogen  
atom, and optionally a second heteroatom selected from  
the group: O, S, and N;

$\text{R}^8$  and  $\text{R}^9$  are independently selected from H,  $\text{C}_1$ - $\text{C}_4$  alkyl,  
35       aryl( $\text{C}_1$ - $\text{C}_4$  alkyl)-, and  $\text{C}_3$ - $\text{C}_7$  cycloalkyl;

alternatively,  $\text{NR}^8\text{R}^9$  may form a 5-6 membered heterocycle  
consisting of carbon atoms, a nitrogen atom, and

5 optionally a second heteroatom selected from the group: O, S, and N;

$R^{11}$  is  $C_1$ - $C_4$  alkyl substituted with 0-1  $R^{11a}$ ,  
6-10 membered aryl substituted with 0-2  $R^{11b}$ , or  
10 5-10 membered heterocyclic ring system consisting of carbon atoms and 1-4 heteroatoms selected from the group: O, S, and N; optionally saturated, partially unsaturated or unsaturated; said 5-10 membered heterocyclic ring system is substituted with 0-2  
15  $R^{11b}$ ;

$R^{11a}$  is  $C_1$ - $C_4$  alkyl, halogen,  $-OR^{14}$ ,  $-SR^{14}$ ,  $-NR^{14}R^{15}$ , aryl, or a 5-6 membered heterocyclic ring system containing 1, 2 or 3 heteroatoms selected from nitrogen, oxygen  
20 and sulfur;

$R^{11b}$  is  $-NO_2$ ,  $-NH_2$ ,  $-SO_3H$ ,  $-SO_2CH_3$ ,  $-CO_2H$ ,  $-CF_3$ ,  $-OH$ ,  $-SH$ ,  $-OCF_3$ , Cl, Br, I, F,  $=O$ ,  $C_1$ - $C_4$  alkyl,  $C_1$ - $C_4$  alkoxy,  $C_1$ - $C_4$  thioalkoxy, aryl, or aryl( $C_1$ - $C_4$  alkyl)-, wherein  
25 aryl is optionally substituted with 0-3 substituents selected from  $-CH_3$ ,  $-NO_2$ ,  $-CN$ ,  $-OH$ ,  $-OCH_3$ ,  $-SO_2CH_3$ ,  $-CF_3$ , Cl, Br, I, and F;

$R^{12}$  is selected from the group: H;  
30  $C_1$ - $C_6$  alkyl substituted with 0-3  $R^{12a}$ ;  
 $C_2$ - $C_6$  alkenyl substituted with 0-3  $R^{12a}$ ;  
 $C_2$ - $C_6$  alkynyl substituted with 0-3  $R^{12a}$ ;  
 $C_3$ - $C_7$  cycloalkyl substituted with 0-3  $R^{12a}$ ;  
 $C_4$ - $C_{10}$  (cycloalkyl-alkyl) substituted with 0-3  $R^{12a}$ ;  
35 6-10 membered aryl substituted with 0-3  $R^{12a}$ ; and  
5-10 membered heterocyclic ring system consisting of carbon atoms and 1-4 heteroatoms selected from the group: O, S, and N; optionally saturated, partially unsaturated or unsaturated; said 5-10 membered

5 heterocyclic ring system is substituted with 0-2  
R<sup>12a</sup>;

R<sup>12a</sup> is independently selected from the group: C<sub>1</sub>-C<sub>6</sub> alkoxy;  
lower thioalkyl; sulfonyl; -NO<sub>2</sub>; halogen; haloalkyl;  
10 carboxyl; carboxy(lower alkyl); -OR<sup>14</sup>; -SR<sup>14</sup>; -NR<sup>14</sup>R<sup>15</sup>;  
-C(=O)NR<sup>14</sup>R<sup>15</sup>; -NR<sup>14</sup>C(=O)R<sup>15</sup>; -S(=O)<sub>2</sub>R<sup>14</sup>;  
C<sub>1</sub>-C<sub>6</sub> alkyl substituted with 0-3 R<sup>12b</sup>;  
C<sub>2</sub>-C<sub>6</sub> alkenyl substituted with 0-3 R<sup>12b</sup>;  
C<sub>2</sub>-C<sub>6</sub> alkynyl substituted with 0-3 R<sup>12b</sup>;  
15 C<sub>3</sub>-C<sub>7</sub> cycloalkyl substituted with 0-3 R<sup>12b</sup>;  
C<sub>4</sub>-C<sub>10</sub> (alkylcycloalkyl) substituted with 0-3 R<sup>12b</sup>;  
6-10 membered aryl substituted with 0-3 R<sup>12b</sup>; and  
5-10 membered heterocyclic ring system consisting of  
carbon atoms and 1-4 heteroatoms selected from the  
20 group: O, S, and N; optionally saturated, partially  
unsaturated or unsaturated; said 5-10 membered  
heterocyclic ring system is substituted with 0-2  
R<sup>12b</sup>;

25 R<sup>12b</sup> is independently selected from the group: C<sub>1</sub>-C<sub>6</sub> alkyl;  
C<sub>3</sub>-C<sub>7</sub> cycloalkyl; C<sub>1</sub>-C<sub>6</sub> alkoxy; halogen; -OR<sup>14</sup>; -SR<sup>14</sup>;  
-NR<sup>14</sup>R<sup>15</sup>; -C(=O)NR<sup>14</sup>R<sup>15</sup>; -NR<sup>14</sup>C(=O)R<sup>15</sup>; -S(=O)<sub>2</sub>R<sup>14</sup>;  
-NO<sub>2</sub>; haloalkyl; carboxyl; carboxy(lower alkyl); aryl;  
and 5-10 membered heterocyclic ring system consisting  
30 of carbon atoms and 1-4 heteroatoms selected from the  
group: O, S, and N; optionally saturated, partially  
unsaturated or unsaturated; said 5-10 membered  
heterocyclic ring system is substituted with C<sub>1</sub>-C<sub>6</sub>  
alkyl;

35

R<sup>14</sup> and R<sup>15</sup> are independently selected from the group: H,  
C<sub>1</sub>-C<sub>4</sub> alkyl, aryl, aryl(C<sub>1</sub>-C<sub>4</sub> alkyl)-, and C<sub>3</sub>-C<sub>7</sub>  
cycloalkyl;

5  $R^{16}$  is a bond, -O-, -S- or -NR<sup>17</sup>-; and

$R^{17}$  is H, C<sub>1</sub>-C<sub>4</sub> alkyl, aryl, aryl(C<sub>1</sub>-C<sub>4</sub> alkyl)-, or  
C<sub>3</sub>-C<sub>6</sub> cycloalkyl.

10 3. A compound of Claim 2, or a stereoisomer or a  
pharmaceutically acceptable salt form or prodrug thereof,  
wherein:

W is -B(Y<sup>1</sup>)(Y<sup>2</sup>);

15

Y<sup>1</sup> and Y<sup>2</sup> are independently selected from:

- a) -OH,
- b) -F,
- c) C<sub>1</sub>-C<sub>8</sub> alkoxy, and

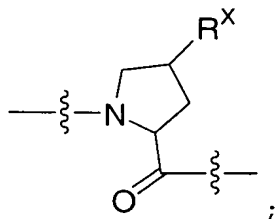
20 when taken together with B, Y<sup>1</sup> and Y<sup>2</sup> form:

- d) a cyclic boronic ester where said cyclic boronic  
ester contains from 2 to 16 carbon atoms, and,  
optionally, 1, 2, or 3 heteroatoms which can be N,  
S, or O;

25

A is A<sup>2</sup>-A<sup>3</sup>, A<sup>2</sup>-A<sup>3</sup>-A<sup>4</sup>, A<sup>2</sup>-A<sup>3</sup>-A<sup>4</sup>-A<sup>5</sup>, or A<sup>2</sup>-A<sup>3</sup>-A<sup>4</sup>-A<sup>5</sup>-A<sup>6</sup>;

A<sup>2</sup> is Ala, Arg, Asn, Asp, Aze, Cys, Gln, Glu, Gly, His,  
Hyp, Ile, Leu, Lys, Met, Orn, Phe, Pro, Sar, Ser, Thr,  
30 Trp, Tyr, Val, Abu, Alg, Ape, Cha, Cpa, Cpg, Dfb, Dpa,  
Gla, Irg, HomoLys, Phe(4-fluoro), Tpa, Asp(OMe),  
Glu(OMe), Hyp(OMe), Asp(O<sup>t</sup>Bu), Glu(O<sup>t</sup>Bu), Hyp(O<sup>t</sup>Bu),  
Thr(O<sup>t</sup>Bu), Asp(OBzl), Glu(OBzl), Hyp(OBzl), Thr(OBzl),  
cyclohexylglycine, cyclohexylalanine,  
35 cyclopropylglycine, t-butylglycine, phenylglycine,  
3,3-diphenylalanine, or



5

A<sup>3</sup>, A<sup>4</sup>, A<sup>5</sup>, and A<sup>6</sup> are independently selected from an amino acid residue wherein said amino acid residue, at each occurrence, is independently selected from the group:

10 Ala, Arg, Asn, Asp, Aze, Cys, Gln, Glu, Gly, His, Hyp, Ile, Leu, Lys, Met, Orn, Phe, Pro, Sar, Ser, Thr, Trp, Tyr, Val, Abu, Alg, Ape, Cha, Cpa, Cpg, Dfb, Dpa, Gla, Irg, HomoLys, Phe(4-fluoro), Tpa, Asp(OMe), Glu(OMe), Hyp(OMe), Asp(O<sup>t</sup>Bu), Glu(O<sup>t</sup>Bu), Hyp(O<sup>t</sup>Bu), Thr(O<sup>t</sup>Bu),  
 15 Asp(OBzl), Glu(OBzl), Hyp(OBzl), Thr(OBzl), cyclohexylglycine, cyclohexylalanine, cyclopropylglycine, t-butylglycine, phenylglycine, and 3,3-diphenylalanine;

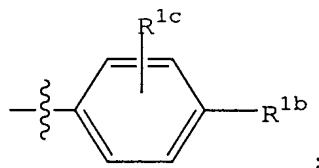
20 R<sup>X</sup> is H or -(CH<sub>2</sub>)<sub>m</sub>-R<sup>16</sup>-(CH<sub>2</sub>)<sub>n</sub>-R<sup>12</sup>;

m and n are independently selected from 0, 1, or 2;

R<sup>1</sup> is -CH<sub>2</sub>CH<sub>2</sub>-R<sup>1a</sup>, -CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>-R<sup>1a</sup>, or -CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>-R<sup>1a</sup>.

25

R<sup>1a</sup> is



R<sup>1b</sup> is selected at each occurrence from the group:

30 H, C<sub>1</sub>-C<sub>4</sub> alkyl, F, Cl, Br, I, -OH, C<sub>1</sub>-C<sub>4</sub> alkoxy, phenoxy, benzyloxy, -SH, -CN, -NO<sub>2</sub>, -C(=O)OR<sup>1d</sup>, -NR<sup>1d</sup>R<sup>1d</sup>, -CF<sub>3</sub>, -OCF<sub>3</sub>, C<sub>3</sub>-C<sub>6</sub> cycloalkyl, and aryl substituted by 0-3 R<sup>1c</sup>;



5

R<sup>1c</sup> is selected at each occurrence from the group: methyl, ethyl, Cl, F, Br, I, OH, methoxy, ethoxy, -CN, -NO<sub>2</sub>, -C(=O)OR<sup>1d</sup>, NR<sup>1d</sup>R<sup>1d</sup>, -CF<sub>3</sub>, and -OCF<sub>3</sub>;

10 R<sup>1d</sup> is H, C<sub>1</sub>-C<sub>4</sub> alkyl, phenyl or benzyl;

R<sup>2</sup> is H, C<sub>1</sub>-C<sub>4</sub> alkyl, phenyl or benzyl;

15 R<sup>3</sup> is H, C<sub>1</sub>-C<sub>4</sub> alkyl, aryl, aryl(C<sub>1</sub>-C<sub>4</sub> alkyl)-, -C(=O)R<sup>11</sup>,  
-CO<sub>2</sub>R<sup>11</sup>, -C(=O)NHR<sup>11</sup>, or an NH<sub>2</sub>-blocking group;

20 R<sup>11</sup> is C<sub>1</sub>-C<sub>4</sub> alkyl substituted with 0-1 R<sup>11a</sup>,  
6-10 membered aryl substituted with 0-2 R<sup>11b</sup>, or  
5-10 membered heterocyclic ring system consisting of  
carbon atoms and 1-4 heteroatoms selected from the  
group: O, S, and N; optionally saturated, partially  
unsaturated or unsaturated; said 5-10 membered  
heterocyclic ring system is substituted with 0-2  
R<sup>11b</sup>;

25

R<sup>11a</sup> is C<sub>1</sub>-C<sub>4</sub> alkyl, halogen, -OR<sup>14</sup>, -SR<sup>14</sup>, -NR<sup>14</sup>R<sup>15</sup>, aryl,  
or a 5-6 membered heterocyclic ring system containing  
1, 2 or 3 heteroatoms selected from nitrogen, oxygen  
and sulfur;

30

35 R<sup>11b</sup> is -NO<sub>2</sub>, -NH<sub>2</sub>, -SO<sub>3</sub>H, -SO<sub>2</sub>CH<sub>3</sub>, -CO<sub>2</sub>H, -CF<sub>3</sub>, -OH, -SH,  
-OCF<sub>3</sub>, Cl, Br, I, F, =O, C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> alkoxy, C<sub>1</sub>-  
C<sub>4</sub> thioalkoxy, aryl, or aryl(C<sub>1</sub>-C<sub>4</sub> alkyl)-, wherein  
aryl is optionally substituted with 0-3 substituents  
selected from -CH<sub>3</sub>, -NO<sub>2</sub>, -CN, -OH, -OCH<sub>3</sub>, -SO<sub>2</sub>CH<sub>3</sub>,  
-CF<sub>3</sub>, Cl, Br, I, and F;

R<sup>12</sup> is selected from the group: H;  
C<sub>1</sub>-C<sub>6</sub> alkyl substituted with 0-3 R<sup>12a</sup>;

5 C<sub>2</sub>-C<sub>6</sub> alkenyl substituted with 0-3 R<sup>12a</sup>;  
C<sub>2</sub>-C<sub>6</sub> alkynyl substituted with 0-3 R<sup>12a</sup>;  
C<sub>3</sub>-C<sub>7</sub> cycloalkyl substituted with 0-3 R<sup>12a</sup>;  
C<sub>4</sub>-C<sub>10</sub> (cycloalkyl-alkyl) substituted with 0-3 R<sup>12a</sup>;  
6-10 membered aryl substituted with 0-3 R<sup>12a</sup>; and  
10 5-10 membered heterocyclic ring system consisting of  
carbon atoms and 1-4 heteroatoms selected from the  
group: O, S, and N; optionally saturated, partially  
unsaturated or unsaturated; said 5-10 membered  
heterocyclic ring system is substituted with 0-2  
15 R<sup>12a</sup>;

R<sup>12a</sup> is independently selected from the group: C<sub>1</sub>-C<sub>6</sub> alkoxy;  
lower thioalkyl; sulfonyl; -NO<sub>2</sub>; halogen; haloalkyl;  
carboxyl; carboxy(lower alkyl); -OR<sup>14</sup>; -SR<sup>14</sup>; -NR<sup>14</sup>R<sup>15</sup>;  
20 -C(=O)NR<sup>14</sup>R<sup>15</sup>; -NR<sup>14</sup>C(=O)R<sup>15</sup>; -S(=O)<sub>2</sub>R<sup>14</sup>;  
C<sub>1</sub>-C<sub>6</sub> alkyl substituted with 0-3 R<sup>12b</sup>;  
C<sub>2</sub>-C<sub>6</sub> alkenyl substituted with 0-3 R<sup>12b</sup>;  
C<sub>2</sub>-C<sub>6</sub> alkynyl substituted with 0-3 R<sup>12b</sup>;  
C<sub>3</sub>-C<sub>7</sub> cycloalkyl substituted with 0-3 R<sup>12b</sup>;  
25 C<sub>4</sub>-C<sub>10</sub> (alkylcycloalkyl) substituted with 0-3 R<sup>12b</sup>;  
6-10 membered aryl substituted with 0-3 R<sup>12b</sup>; and  
5-10 membered heterocyclic ring system consisting of  
carbon atoms and 1-4 heteroatoms selected from the  
group: O, S, and N; optionally saturated, partially  
30 unsaturated or unsaturated; said 5-10 membered  
heterocyclic ring system is substituted with 0-2  
R<sup>12b</sup>;

R<sup>12b</sup> is independently selected from the group: C<sub>1</sub>-C<sub>6</sub> alkyl;  
35 C<sub>3</sub>-C<sub>7</sub> cycloalkyl; C<sub>1</sub>-C<sub>6</sub> alkoxy; halogen; -OR<sup>14</sup>; -SR<sup>14</sup>;  
-NR<sup>14</sup>R<sup>15</sup>; -C(=O)NR<sup>14</sup>R<sup>15</sup>; -NR<sup>14</sup>C(=O)R<sup>15</sup>; -S(=O)<sub>2</sub>R<sup>14</sup>;  
-NO<sub>2</sub>; haloalkyl; carboxyl; carboxy(lower alkyl); and

5 5-10 membered heterocyclic ring system consisting of  
carbon atoms and 1-4 heteroatoms selected from the  
group: O, S, and N; optionally saturated, partially  
unsaturated or unsaturated; said 5-10 membered  
heterocyclic ring system is substituted with C<sub>1</sub>-C<sub>6</sub>  
10 alkyl;

R<sup>14</sup> and R<sup>15</sup> are independently selected from the group: H,  
C<sub>1</sub>-C<sub>4</sub> alkyl, aryl, aryl(C<sub>1</sub>-C<sub>4</sub> alkyl)-, and C<sub>3</sub>-C<sub>7</sub>  
cycloalkyl;

15 R<sup>16</sup> is a bond, -O-, -S- or -NR<sup>17</sup>-; and

R<sup>17</sup> is H, C<sub>1</sub>-C<sub>4</sub> alkyl, aryl or aryl(C<sub>1</sub>-C<sub>4</sub> alkyl).

20 4. A compound of Claim 3, or a stereoisomer or a  
pharmaceutically acceptable salt form or prodrug thereof,  
wherein:

W is -B(Y<sup>1</sup>)(Y<sup>2</sup>);

25 Y<sup>1</sup> and Y<sup>2</sup> are independently selected from:

- a) -OH,
- b) C<sub>1</sub>-C<sub>6</sub> alkoxy, or

when taken together with B, Y<sup>1</sup> and Y<sup>2</sup> form:

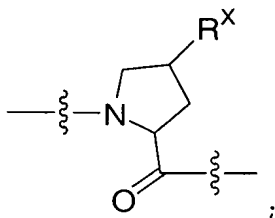
30 d) a cyclic boronic ester where said cyclic boronic  
ester contains from 2 to 16 carbon atoms;

A is A<sup>2</sup>-A<sup>3</sup>-A<sup>4</sup>, A<sup>2</sup>-A<sup>3</sup>-A<sup>4</sup>-A<sup>5</sup>, or A<sup>2</sup>-A<sup>3</sup>-A<sup>4</sup>-A<sup>5</sup>-A<sup>6</sup>;

35 A<sup>2</sup> is Ala, Arg, Asn, Asp, Aze, Cys, Gln, Glu, Gly, His,  
Hyp, Ile, Leu, Lys, Met, Orn, Phe, Pro, Sar, Ser, Thr,  
Trp, Tyr, Val, Abu, Alg, Ape, Cha, Cpa, Cpg, Dfb, Dpa,  
Gla, Irg, HomoLys, Phe(4-fluoro), Tpa, Asp(OMe),  
Glu(OMe), Hyp(OMe), Asp(O<sup>t</sup>Bu), Glu(O<sup>t</sup>Bu), Hyp(O<sup>t</sup>Bu),  
40 Thr(O<sup>t</sup>Bu), Asp(OBzl), Glu(OBzl), Hyp(OBzl), Thr(OBzl),

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5 cyclohexylglycine, cyclohexylalanine,  
cyclopropylglycine, t-butylglycine, phenylglycine,  
3,3-diphenylalanine, or



10

A<sup>3</sup>, A<sup>4</sup>, A<sup>5</sup>, and A<sup>6</sup> are independently selected from an amino acid residue wherein said amino acid residue, at each occurrence, is independently selected from the group:

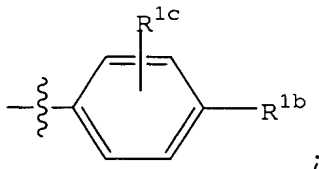
Ala, Arg, Asn, Asp, Aze, Cys, Gln, Glu, Gly, His, Hyp,  
15 Ile, Leu, Lys, Met, Orn, Phe, Pro, Sar, Ser, Thr, Trp,  
Tyr, Val, Abu, Alg, Ape, Cha, Cpa, Cpg, Dfb, Dpa, Gla,  
Irg, HomoLys, Phe(4-fluoro), Tpa, Asp(OMe), Glu(OMe),  
Hyp(OMe), Asp(O<sup>t</sup>Bu), Glu(O<sup>t</sup>Bu), Hyp(O<sup>t</sup>Bu), Thr(O<sup>t</sup>Bu),  
Asp(OBzl), Glu(OBzl), Hyp(OBzl), Thr(OBzl),  
20 cyclohexylglycine, cyclohexylalanine,  
cyclopropylglycine, t-butylglycine, phenylglycine, and  
3,3-diphenylalanine;

R<sup>X</sup> is H or  $-(CH_2)_m-R^{16}-(CH_2)_n-R^{12}$ ;

25

m and n are independently selected from 0, 1, or 2;

R<sup>1</sup> is  $-CH_2CH_2-R^{1a}$ ,  $-CH_2CH_2CH_2CH_2-R^{1a}$ , or  $-CH_2CH_2CH_2CH_2CH_2-R^{1a}$ .

30 R<sup>1a</sup> is

R<sup>1b</sup> is selected at each occurrence from the group:

- 5 H, C<sub>1</sub>-C<sub>4</sub> alkyl, F, Cl, Br, I, -OH, C<sub>1</sub>-C<sub>4</sub> alkoxy, phenoxy, benzyloxy, -SH, -CN, -NO<sub>2</sub>, -C(=O)OR<sup>1d</sup>, -NR<sup>1d</sup>R<sup>1d</sup>, -CF<sub>3</sub>, -OCF<sub>3</sub>, C<sub>3</sub>-C<sub>6</sub> cycloalkyl, and aryl substituted by 0-3 R<sup>1c</sup>;
- 10 R<sup>1c</sup> is selected at each occurrence from the group: methyl, ethyl, Cl, F, Br, I, OH, methoxy, ethoxy, -CN, -NO<sub>2</sub>, -C(=O)OR<sup>1d</sup>, NR<sup>1d</sup>R<sup>1d</sup>, -CF<sub>3</sub>, and -OCF<sub>3</sub>;
- R<sup>1d</sup> is H, C<sub>1</sub>-C<sub>4</sub> alkyl, phenyl or benzyl;
- 15 R<sup>2</sup> is H, methyl, ethyl, propyl, or butyl;
- R<sup>3</sup> is H, C<sub>1</sub>-C<sub>4</sub> alkyl, aryl, aryl(C<sub>1</sub>-C<sub>4</sub> alkyl)-, -C(=O)R<sup>11</sup>, -CO<sub>2</sub>R<sup>11</sup>, -C(=O)NHR<sup>11</sup> or acetyl;
- 20 R<sup>11</sup> is C<sub>1</sub>-C<sub>4</sub> alkyl substituted with 0-1 R<sup>11a</sup>, phenyl substituted with 0-2 R<sup>11b</sup>, or 5-6 membered heterocyclic ring system consisting of carbon atoms and 1-4 heteroatoms selected from the
- 25 group: O, S, and N; optionally saturated, partially unsaturated or unsaturated; said 5-6 membered heterocyclic ring system is substituted with 0-2 R<sup>11b</sup>;
- 30 R<sup>11a</sup> is C<sub>1</sub>-C<sub>4</sub> alkyl, halogen, -OR<sup>14</sup>, -SR<sup>14</sup>, -NR<sup>14</sup>R<sup>15</sup>, phenyl, or a 5-6 membered heterocyclic ring system containing 1, 2 or 3 heteroatoms selected from nitrogen, oxygen and sulfur;
- 35 R<sup>11b</sup> is -NO<sub>2</sub>, -NH<sub>2</sub>, -SO<sub>3</sub>H, -SO<sub>2</sub>CH<sub>3</sub>, -CO<sub>2</sub>H, -CF<sub>3</sub>, -OH, -SH, -OCF<sub>3</sub>, Cl, Br, I, F, =O, methyl, ethyl, propyl, butyl, -OCH<sub>3</sub>, -OCH<sub>2</sub>CH<sub>3</sub>, -SCH<sub>3</sub>, -SCH<sub>2</sub>CH<sub>3</sub>, phenyl, or benzyl;
- R<sup>12</sup> is selected from the group: H;

5 C<sub>1</sub>-C<sub>4</sub> alkyl substituted with 0-2 R<sup>12a</sup>;  
6-10 membered substituted with 0-3 R<sup>12a</sup>; and  
5-10 membered heterocyclic ring system consisting of  
carbon atoms and 1-4 heteroatoms selected from the  
group: O, S, and N; optionally saturated, partially  
10 unsaturated or unsaturated; said 5-10 membered  
heterocyclic ring system is substituted with 0-2  
R<sup>12a</sup>;

R<sup>12a</sup> is independently selected from the group: -NO<sub>2</sub>;  
15 halogen; haloalkyl; carboxyl; carboxy(lower alkyl);  
-OR<sup>14</sup>; -SR<sup>14</sup>; -NR<sup>14</sup>R<sup>15</sup>; -C(=O)NR<sup>14</sup>R<sup>15</sup>; -NR<sup>14</sup>C(=O)R<sup>15</sup>;  
C<sub>1</sub>-C<sub>4</sub> alkyl substituted with 0-2 R<sup>12b</sup>;  
phenyl substituted with 0-3 R<sup>12b</sup>; and  
5-6 membered heterocyclic ring system consisting of  
20 carbon atoms and 1-4 heteroatoms selected from the  
group: O, S, and N; optionally saturated, partially  
unsaturated or unsaturated; said 5-6 membered  
heterocyclic ring system is substituted with 0-2  
R<sup>12b</sup>;

25 R<sup>12b</sup> is independently selected from the group: C<sub>1</sub>-C<sub>4</sub> alkyl;  
C<sub>3</sub>-C<sub>6</sub> cycloalkyl; F; Cl; Br; I; -OR<sup>14</sup>; -SR<sup>14</sup>;  
-NR<sup>14</sup>R<sup>15</sup>; -C(=O)NR<sup>14</sup>R<sup>15</sup>; -NR<sup>14</sup>C(=O)R<sup>15</sup>; -S(=O)<sub>2</sub>R<sup>14</sup>;  
-NO<sub>2</sub>; haloalkyl; carboxyl; carboxy(lower alkyl); and  
30 5-6 membered heterocyclic ring system consisting of  
carbon atoms and 1-4 heteroatoms selected from the  
group: O, S, and N; optionally saturated, partially  
unsaturated or unsaturated; said 5-6 membered  
heterocyclic ring system is substituted with C<sub>1</sub>-C<sub>6</sub>  
35 alkyl;

R<sup>14</sup> and R<sup>15</sup> are independently selected from the group: H,  
C<sub>1</sub>-C<sub>4</sub> alkyl, phenyl and benzyl;

5  $R^{16}$  is a bond, -O-, -S- or -NR<sup>17</sup>-; and

$R^{17}$  is H, methyl, ethyl, propyl, butyl, phenyl or benzyl.

5. A compound of Claim 4, or a stereoisomer or a  
10 pharmaceutically acceptable salt form or prodrug thereof,  
wherein:

W is -B(Y<sup>1</sup>)(Y<sup>2</sup>);

15 Y<sup>1</sup> and Y<sup>2</sup> are independently selected from:

a) -OH,

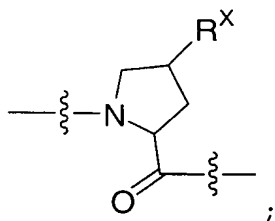
b) C<sub>1</sub>-C<sub>6</sub> alkoxy, or

when taken together with B, Y<sup>1</sup> and Y<sup>2</sup> form:

20 d) a cyclic boronic ester where said cyclic boronic  
ester contains from 2 to 14 carbon atoms;

A is A<sup>2</sup>-A<sup>3</sup>-A<sup>4</sup>, A<sup>2</sup>-A<sup>3</sup>-A<sup>4</sup>-A<sup>5</sup>, or A<sup>2</sup>-A<sup>3</sup>-A<sup>4</sup>-A<sup>5</sup>-A<sup>6</sup>;

A<sup>2</sup> is Ala, Arg, Asn, Asp, Aze, Cys, Gln, Glu, Gly, His,  
25 Hyp, Ile, Leu, Lys, Met, Orn, Phe, Pro, Sar, Ser, Thr,  
Trp, Tyr, Val, Abu, Alg, Ape, Cha, Cpa, Cpg, Dfb, Dpa,  
Gla, Irg, HomoLys, Phe(4-fluoro), Tpa, Asp(OMe),  
Glu(OMe), Hyp(OMe), Asp(O<sup>t</sup>Bu), Glu(O<sup>t</sup>Bu), Hyp(O<sup>t</sup>Bu),  
Thr(O<sup>t</sup>Bu), Asp(OBzl), Glu(OBzl), Hyp(OBzl), Thr(OBzl),  
30 cyclohexylglycine, cyclohexylalanine,  
cyclopropylglycine, t-butylglycine, phenylglycine,  
3,3-diphenylalanine, or



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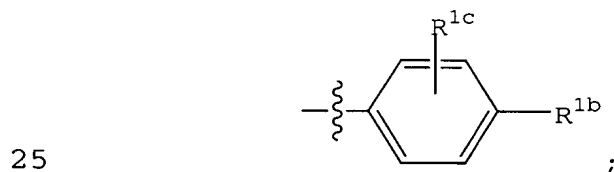
5 A<sup>3</sup>, A<sup>4</sup>, A<sup>5</sup>, and A<sup>6</sup> are independently selected from an amino acid residue wherein said amino acid residue, at each occurrence, is independently selected from the group:  
 Ala, Arg, Asn, Asp, Aze, Cys, Gln, Glu, Gly, His, Hyp,  
 10 Ile, Leu, Lys, Met, Orn, Phe, Pro, Sar, Ser, Thr, Trp, Tyr, Val, Abu, Alg, Ape, Cha, Cpa, Cpg, Dfb, Dpa, Gla, Irg, HomoLys, Phe(4-fluoro), Tpa, Asp(OMe), Glu(OMe), Hyp(OMe), Asp(O<sup>t</sup>Bu), Glu(O<sup>t</sup>Bu), Hyp(O<sup>t</sup>Bu), Thr(O<sup>t</sup>Bu), Asp(OBzl), Glu(OBzl), Hyp(OBzl), Thr(OBzl), cyclohexylglycine, cyclohexylalanine,  
 15 cyclopropylglycine, t-butylglycine, phenylglycine, and 3,3-diphenylalanine;

R<sup>x</sup> is H or -(CH<sub>2</sub>)<sub>m</sub>-R<sup>16</sup>-(CH<sub>2</sub>)<sub>n</sub>-R<sup>12</sup>;

20 m and n are independently selected from 0 or 1;

R<sup>1</sup> is -CH<sub>2</sub>CH<sub>2</sub>-R<sup>1a</sup> or -CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>-R<sup>1a</sup>;

R<sup>1a</sup> is



R<sup>1b</sup> is selected at each occurrence from the group:

H, C<sub>1</sub>-C<sub>4</sub> alkyl, F, Cl, Br, I, -OH, C<sub>1</sub>-C<sub>4</sub> alkoxy, phenoxy, benzyloxy, -SH, -CN, -NO<sub>2</sub>, -C(=O)OR<sup>1d</sup>,  
 30 -NR<sup>1d</sup>R<sup>1d</sup>, -CF<sub>3</sub>, -OCF<sub>3</sub>, C<sub>3</sub>-C<sub>6</sub> cycloalkyl, and aryl substituted by 0-3 R<sup>1c</sup>;

R<sup>1c</sup> is selected at each occurrence from the methyl, ethyl, Cl, F, Br, I, OH, methoxy, ethoxy, -CN, -NO<sub>2</sub>,

35 -C(=O)OR<sup>1d</sup>, NR<sup>1d</sup>R<sup>1d</sup>, -CF<sub>3</sub>, and -OCF<sub>3</sub>;

R<sup>1d</sup> is H, methyl, ethyl, propyl, butyl, phenyl or benzyl;



5

R<sup>2</sup> is H or methyl;

R<sup>3</sup> is H, methyl, ethyl, propyl, butyl, phenyl, benzyl,  
-C(=O)R<sup>11</sup>, -CO<sub>2</sub>R<sup>11</sup>, -C(=O)NHR<sup>11</sup> or acetyl;

10

R<sup>11</sup> is C<sub>1</sub>-C<sub>4</sub> alkyl substituted with 0-1 R<sup>11a</sup>,  
phenyl substituted with 0-2 R<sup>11b</sup>, or  
5-6 membered heterocyclic ring system consisting of  
carbon atoms and 1-4 heteroatoms selected from the  
group: O, S, and N; optionally saturated, partially  
unsaturated or unsaturated; said 5-6 membered  
heterocyclic ring system is substituted with 0-2  
R<sup>11b</sup>;

15

20 R<sup>11a</sup> is methyl, ethyl propyl, butyl, F, Cl, Br, Cl, -OH,  
-OCH<sub>3</sub>, -SH, -SCH<sub>3</sub>, -NH<sub>2</sub>, -NHCH<sub>3</sub>, -N(CH<sub>3</sub>)<sub>2</sub>, phenyl, or a  
5-6 membered heterocyclic ring system containing 1, 2  
or 3 heteroatoms selected from nitrogen, oxygen and  
sulfur;

25

R<sup>11b</sup> is -NO<sub>2</sub>, -NH<sub>2</sub>, -SO<sub>3</sub>H, -SO<sub>2</sub>CH<sub>3</sub>, -CO<sub>2</sub>H, -CF<sub>3</sub>, -OH, -SH,  
-OCF<sub>3</sub>, Cl, Br, I, F, =O, methyl, ethyl, propyl, butyl,  
-OCH<sub>3</sub>, -OCH<sub>2</sub>CH<sub>3</sub>, -SCH<sub>3</sub>, -SCH<sub>2</sub>CH<sub>3</sub>, phenyl, or benzyl;

30 R<sup>12</sup> is selected from the group: H;

C<sub>1</sub>-C<sub>4</sub> alkyl substituted with 0-2 R<sup>12a</sup>;

6-10 membered aryl substituted with 0-3 R<sup>12a</sup>; and

5-10 membered heterocyclic ring system consisting of

carbon atoms and 1-4 heteroatoms selected from the

35 group: O, S, and N; optionally saturated, partially  
unsaturated or unsaturated; said 5-10 membered  
heterocyclic ring system is substituted with 0-2  
R<sup>12a</sup>;

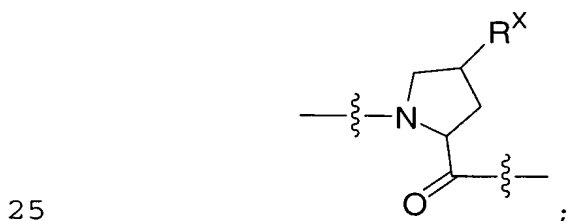
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- 5 R<sup>12a</sup> is independently selected from the group: -NO<sub>2</sub>;  
halogen; haloalkyl; carboxyl; carboxy(lower alkyl);  
-OR<sup>14</sup>; -SR<sup>14</sup>; -NR<sup>14</sup>R<sup>15</sup>; -C(=O)NR<sup>14</sup>R<sup>15</sup>; -NR<sup>14</sup>C(=O)R<sup>15</sup>;  
C<sub>1</sub>-C<sub>4</sub> alkyl substituted with 0-3 R<sup>12b</sup>;  
phenyl substituted with 0-3 R<sup>12b</sup>; and  
10 5-6 membered heterocyclic ring system consisting of  
carbon atoms and 1-4 heteroatoms selected from the  
group: O, S, and N; optionally saturated, partially  
unsaturated or unsaturated;
- 15 R<sup>12b</sup> is independently selected from the group: C<sub>1</sub>-C<sub>4</sub> alkyl;  
C<sub>3</sub>-C<sub>6</sub> cycloalkyl; F; Cl; Br; I; -OR<sup>14</sup>; -SR<sup>14</sup>;  
-NR<sup>14</sup>R<sup>15</sup>; -C(=O)NR<sup>14</sup>R<sup>15</sup>; -NR<sup>14</sup>C(=O)R<sup>15</sup>; -S(=O)<sub>2</sub>R<sup>14</sup>;  
-NO<sub>2</sub>; haloalkyl; carboxyl; carboxy(lower alkyl); and  
5-6 membered heterocyclic ring system consisting of  
20 carbon atoms and 1-4 heteroatoms selected from the  
group: O, S, and N; optionally saturated, partially  
unsaturated or unsaturated;
- R<sup>14</sup> and R<sup>15</sup> are independently selected from the group: H,  
25 methyl, ethyl, propyl, butyl, phenyl, and benzyl;
- R<sup>16</sup> is a bond, -O-, -S- or -NR<sup>17</sup>-; and
- R<sup>17</sup> is H, methyl, ethyl, propyl, butyl, phenyl, or benzyl.  
30
6. A compound of Claim 5, or a stereoisomer or a  
pharmaceutically acceptable salt form or prodrug thereof,  
wherein:
- 35 W is -B(Y<sup>1</sup>)(Y<sup>2</sup>);
- Y<sup>1</sup> and Y<sup>2</sup> are independently selected from:  
a) -OH,  
b) C<sub>1</sub>-C<sub>6</sub> alkoxy, or  
40 when taken together with B, Y<sup>1</sup> and Y<sup>2</sup> form:

5 c) a cyclic boronic ester where said cyclic boronic ester is formed from the group: pinanediol, pinacol, 1,2-ethanediol, 1,3-propanediol, 1,2-propanediol, 2,3-butanediol, 1,2-diisopropylethanediol, 5,6-decanediol, 1,2-dicyclohexylethanediol, diethanolamine, and 1,2-diphenyl-1,2-ethanediol;

A is A<sup>2</sup>-A<sup>3</sup>-A<sup>4</sup>, A<sup>2</sup>-A<sup>3</sup>-A<sup>4</sup>-A<sup>5</sup>, or A<sup>2</sup>-A<sup>3</sup>-A<sup>4</sup>-A<sup>5</sup>-A<sup>6</sup>;

15 A<sup>2</sup> is Ala, Arg, Asn, Asp, Aze, Cys, Gln, Glu, Gly, His, Hyp, Ile, Leu, Lys, Met, Orn, Phe, Pro, Sar, Ser, Thr, Trp, Tyr, Val, Abu, Alg, Ape, Cha, Cpa, Cpg, Dfb, Dpa, Gla, Irg, HomoLys, Phe(4-fluoro), Tpa, Asp(OMe), Glu(OMe), Hyp(OMe), Asp(O<sup>t</sup>Bu), Glu(O<sup>t</sup>Bu), Hyp(O<sup>t</sup>Bu),  
 20 Thr(O<sup>t</sup>Bu), Asp(OBzl), Glu(OBzl), Hyp(OBzl), Thr(OBzl), cyclohexylglycine, cyclohexylalanine, cyclopropylglycine, t-butylglycine, phenylglycine, 3,3-diphenylalanine, or



A<sup>3</sup>, A<sup>4</sup>, A<sup>5</sup>, and A<sup>6</sup> are independently selected from an amino acid residue wherein said amino acid residue, at each occurrence, is independently selected from the group:

30 Ala, Arg, Asn, Asp, Aze, Cys, Gln, Glu, Gly, His, Hyp, Ile, Leu, Lys, Met, Orn, Phe, Pro, Sar, Ser, Thr, Trp, Tyr, Val, Abu, Alg, Ape, Cha, Cpa, Cpg, Dfb, Dpa, Gla, Irg, HomoLys, Phe(4-fluoro), Tpa, Asp(OMe), Glu(OMe), Hyp(OMe), Asp(O<sup>t</sup>Bu), Glu(O<sup>t</sup>Bu), Hyp(O<sup>t</sup>Bu), Thr(O<sup>t</sup>Bu),  
 35 Asp(OBzl), Glu(OBzl), Hyp(OBzl), Thr(OBzl), cyclohexylglycine, cyclohexylalanine,

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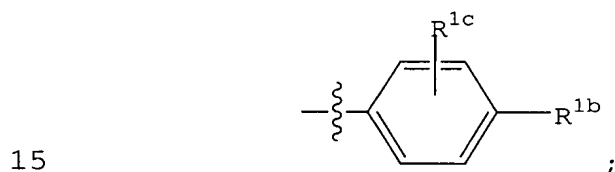
5 cyclopropylglycine, t-butylglycine, phenylglycine, and  
3,3-diphenylalanine;

$R^X$  is H, or  $-(CH_2)_m-R^{16}-(CH_2)_n-R^{12}$ ;

10 m and n are independently selected from 0 or 1;

$R^1$  is  $-CH_2CH_2-R^{1a}$  or  $-CH_2CH_2CH_2CH_2-R^{1a}$ ;

$R^{1a}$  is



$R^{1b}$  is selected at each occurrence from the group:

H,  $C_1$ - $C_4$  alkyl, F, Cl, Br, I, -OH,  $C_1$ - $C_4$  alkoxy,  
phenoxy, benzyloxy, -SH, -CN, -NO<sub>2</sub>, -C(=O)OR<sup>1d</sup>,  
20 -NR<sup>1d</sup>R<sup>1d</sup>, -CF<sub>3</sub>, -OCF<sub>3</sub>,  $C_3$ - $C_6$  cycloalkyl, and aryl  
substituted by 0-3  $R^{1c}$ ;

$R^{1c}$  is selected at each occurrence from the methyl, ethyl,  
Cl, F, Br, I, OH, methoxy, ethoxy, -CN, -NO<sub>2</sub>,

25 -C(=O)OR<sup>1d</sup>, NR<sup>1d</sup>R<sup>1d</sup>, -CF<sub>3</sub>, and -OCF<sub>3</sub>;

$R^{1d}$  is H, methyl, ethyl, propyl, butyl, phenyl or benzyl;

$R^2$  is H or methyl;

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$R^3$  is H, methyl, ethyl, propyl, butyl, phenyl, benzyl,  
-C(=O)R<sup>11</sup>, -CO<sub>2</sub>R<sup>11</sup>, -C(=O)NHR<sup>11</sup> or acetyl;

$R^{11}$  is  $C_1$ - $C_4$  alkyl substituted with 0-1  $R^{11a}$ ,

35 phenyl substituted with 0-2  $R^{11b}$ , or

5 5-6 membered heterocyclic ring system consisting of  
carbon atoms and 1-4 heteroatoms selected from the  
group: O, S, and N; optionally saturated, partially  
unsaturated or unsaturated; said 5-6 membered  
heterocyclic ring system is substituted with 0-2  
10 R<sup>11b</sup>;

R<sup>11a</sup> is methyl, ethyl propyl, butyl, F, Cl, Br, Cl, -OH,  
-OCH<sub>3</sub>, -SH, -SCH<sub>3</sub>, -NH<sub>2</sub>, -NHCH<sub>3</sub>, -N(CH<sub>3</sub>)<sub>2</sub>, phenyl, or a  
5-6 membered heterocyclic ring system containing 1, 2  
15 or 3 heteroatoms selected from nitrogen, oxygen and  
sulfur;

R<sup>11b</sup> is -NO<sub>2</sub>, -NH<sub>2</sub>, -SO<sub>3</sub>H, -SO<sub>2</sub>CH<sub>3</sub>, -CO<sub>2</sub>H, -CF<sub>3</sub>, -OH, -SH,  
-OCF<sub>3</sub>, Cl, Br, I, F, =O, methyl, ethyl, propyl, butyl,  
20 -OCH<sub>3</sub>, -OCH<sub>2</sub>CH<sub>3</sub>, -SCH<sub>3</sub>, -SCH<sub>2</sub>CH<sub>3</sub>, phenyl, or benzyl;

R<sup>12</sup> is selected from the group: H;  
C<sub>1</sub>-C<sub>4</sub> alkyl substituted with 0-2 R<sup>12a</sup>;  
6-10 member aryl substituted with 0-3 R<sup>12a</sup>; and  
25 5-10 membered heterocyclic ring system consisting of  
carbon atoms and 1-4 heteroatoms selected from the  
group: O, S, and N; optionally saturated, partially  
unsaturated or unsaturated; said 5-10 membered  
heterocyclic ring system is substituted with 0-2  
30 R<sup>12a</sup>;

R<sup>12a</sup> is independently selected from the group: -NO<sub>2</sub>;  
halogen; haloalkyl; carboxyl; carboxy(lower alkyl);  
-OR<sup>14</sup>; -SR<sup>14</sup>; -NR<sup>14</sup>R<sup>15</sup>; -C(=O)NR<sup>14</sup>R<sup>15</sup>; -NR<sup>14</sup>C(=O)R<sup>15</sup>;  
35 C<sub>1</sub>-C<sub>4</sub> alkyl; phenyl; and  
5-6 membered heterocyclic ring system consisting of  
carbon atoms and 1-4 heteroatoms selected from the  
group: O, S, and N; optionally saturated, partially  
unsaturated or unsaturated;

5 R<sup>14</sup> and R<sup>15</sup> are independently selected from the group: H, methyl, and ethyl; and

R<sup>16</sup> is a bond, -O- or -S-.

10 7. A compound of Claim 6, or a stereoisomer or a pharmaceutically acceptable salt form or prodrug thereof, wherein:

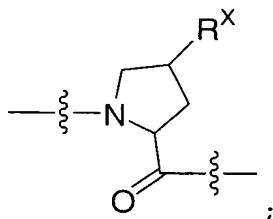
W is pinanediol boronic ester;

15

A is A<sup>2</sup>-A<sup>3</sup>-A<sup>4</sup>, A<sup>2</sup>-A<sup>3</sup>-A<sup>4</sup>-A<sup>5</sup>, or A<sup>2</sup>-A<sup>3</sup>-A<sup>4</sup>-A<sup>5</sup>-A<sup>6</sup>;

A<sup>2</sup> is Ala, Arg, Asn, Asp, Cys, Gln, Glu, Gly, His, Hyp, Ile, Leu, Lys, Met, Phe, Pro, Ser, Thr, Trp, Tyr, Val, Abu, Asp(OMe), Glu(OMe), Hyp(OMe), Asp(O<sup>t</sup>Bu), Glu(O<sup>t</sup>Bu), Hyp(O<sup>t</sup>Bu), Thr(O<sup>t</sup>Bu), Asp(OBzl), Glu(OBzl), Hyp(OBzl), Thr(OBzl), cyclohexylalanine, or

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A<sup>3</sup>, A<sup>4</sup>, A<sup>5</sup>, and A<sup>6</sup> are independently selected from an amino acid residue wherein said amino acid residue, at each occurrence, is independently selected from the group: Ala, Arg, Asn, Asp, Cys, Gln, Glu, Gly, His, Hyp, Ile, Leu, Lys, Met, Phe, Pro, Ser, Thr, Trp, Tyr, Val, Asp(OMe), Glu(OMe), Hyp(OMe), Asp(O<sup>t</sup>Bu), Glu(O<sup>t</sup>Bu), Hyp(O<sup>t</sup>Bu), Thr(O<sup>t</sup>Bu), Asp(OBzl), Glu(OBzl), Hyp(OBzl), Thr(OBzl), cyclohexylglycine, cyclohexylalanine, cyclohexylglycine, cyclopropylglycine, t-butylglycine, phenylglycine, and 3,3-diphenylalanine;

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$R^1$  is  $-\text{CH}_2\text{CH}_2-\text{R}^{1a}$  or  $-\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2-\text{R}^{1a}$ ;

$R^{1a}$  is selected from the group: phenyl, 2-naphthyl, 2-methylphenyl, 3-methylphenyl, 4-methylphenyl, 4-(1,1'-  
10 biphenyl)-, 2,5-dimethylphenyl, 2,4-dimethylphenyl, 3-CF<sub>3</sub>-phenyl, 4-CF<sub>3</sub>-phenyl, 2-F-phenyl, 3-F-phenyl, 4-F-phenyl, 4-Cl-phenyl, 4-Br-phenyl, 4-phenoxyphenyl, 4-isopropylphenyl, 4-cyclohexylphenyl, 4-tBu-phenyl, 4-methoxyphenyl, 2,6-diF-phenyl, 4-hydroxy-phenyl,  
15 (4-methoxyphenoxy)phenyl, methyl, ethyl, propyl, i-propyl, n-butyl, i-butyl, and cyclobutyl;

$R^X$  is H or  $-(\text{CH}_2)_m-\text{R}^{16}-(\text{CH}_2)_n-\text{R}^{12}$ ;

20 m and n are independently selected from 0 or 1;

$R^2$  is H or methyl;

$R^3$  is H, methyl, ethyl propyl, butyl, phenyl, benzyl,  
25  $-\text{C}(=\text{O})\text{R}^{11}$ ,  $-\text{CO}_2\text{R}^{11}$ ,  $-\text{C}(=\text{O})\text{NHR}^{11}$  or acetyl;

$R^{11}$  is C<sub>1</sub>-C<sub>4</sub> alkyl substituted with 0-1  $R^{11a}$ ,  
phenyl substituted with 0-2  $R^{11b}$ , or  
5-6 membered heterocyclic ring system consisting of  
30 carbon atoms and 1-4 heteroatoms selected from the group: O, S, and N; optionally saturated, partially unsaturated or unsaturated; said 5-6 membered heterocyclic ring system is substituted with 0-2  $R^{11b}$ ;

35

$R^{11a}$  is methyl, ethyl propyl, butyl, F, Cl, Br, Cl, -OH, -OCH<sub>3</sub>, -SH, -SCH<sub>3</sub>, -NH<sub>2</sub>, -NHCH<sub>3</sub>, -N(CH<sub>3</sub>)<sub>2</sub>, phenyl, or a  
5-6 membered heterocyclic ring system containing 1, 2  
or 3 heteroatoms selected from nitrogen, oxygen and  
40 sulfur;

5

R<sup>11b</sup> is -NO<sub>2</sub>, -NH<sub>2</sub>, -SO<sub>3</sub>H, -SO<sub>2</sub>CH<sub>3</sub>, -CO<sub>2</sub>H, -CF<sub>3</sub>, -OH, -SH, -OCF<sub>3</sub>, Cl, Br, I, F, =O, methyl, ethyl, propyl, butyl, -OCH<sub>3</sub>, -OCH<sub>2</sub>CH<sub>3</sub>, -SCH<sub>3</sub>, -SCH<sub>2</sub>CH<sub>3</sub>, phenyl, or benzyl;

10

R<sup>12</sup> is selected from the group: H;

C<sub>1</sub>-C<sub>4</sub> alkyl substituted with 0-2 R<sup>12a</sup>;

6-10 member aryl substituted with 0-3 R<sup>12a</sup>; and

5-10 membered heterocyclic ring system consisting of carbon atoms and 1-4 heteroatoms selected from the

15

group: O, S, and N; optionally saturated, partially unsaturated or unsaturated; said 5-10 membered heterocyclic ring system is substituted with 0-2 R<sup>12a</sup>;

20

R<sup>12a</sup> is independently selected from the group: -NO<sub>2</sub>;

halogen; haloalkyl; carboxyl; carboxy(lower alkyl);

-OR<sup>14</sup>; -SR<sup>14</sup>; -NR<sup>14</sup>R<sup>15</sup>; -C(=O)NR<sup>14</sup>R<sup>15</sup>; -NR<sup>14</sup>C(=O)R<sup>15</sup>;

C<sub>1</sub>-C<sub>4</sub> alkyl; phenyl; and

5-6 membered heterocyclic ring system consisting of

25

carbon atoms and 1-4 heteroatoms selected from the group: O, S, and N; optionally saturated, partially unsaturated or unsaturated;

R<sup>14</sup> and R<sup>15</sup> are independently selected from the group: H,

30

methyl, and ethyl; and

R<sup>16</sup> is a bond, -O- or -S-.

8. A compound of Claim 7, or a stereoisomer or a

35

pharmaceutically acceptable salt form or prodrug thereof, wherein:

W is pinanediol boronic ester;

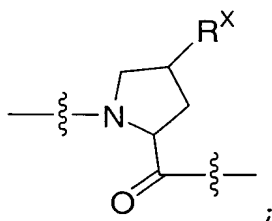
40

A is A<sup>2</sup>-A<sup>3</sup>-A<sup>4</sup>, A<sup>2</sup>-A<sup>3</sup>-A<sup>4</sup>-A<sup>5</sup>, or A<sup>2</sup>-A<sup>3</sup>-A<sup>4</sup>-A<sup>5</sup>-A<sup>6</sup>;



5

A<sup>2</sup> is Ala, Arg, Asn, Asp, Cys, Gln, Glu, Gly, His, Hyp,  
 Ile, Leu, Lys, Met, Phe, Pro, Ser, Thr, Trp, Tyr, Val,  
 Abu, Asp(OMe), Glu(OMe), Hyp(OMe), Asp(O<sup>t</sup>Bu),  
 Glu(O<sup>t</sup>Bu), Hyp(O<sup>t</sup>Bu), Thr(O<sup>t</sup>Bu), Asp(OBzl), Glu(OBzl),  
 10 Hyp(OBzl), Thr(OBzl), cyclohexylalanine, or



A<sup>3</sup>, A<sup>4</sup>, A<sup>5</sup>, and A<sup>6</sup> are independently selected from an amino  
 15 acid residue wherein said amino acid residue, at each  
 occurrence, is independently selected from the group:  
 Ala, Arg, Asn, Asp, Cys, Gln, Glu, Gly, His, Hyp, Ile,  
 Leu, Lys, Met, Phe, Pro, Ser, Thr, Trp, Tyr, Val,  
 Asp(OMe), Glu(OMe), Hyp(OMe), Asp(O<sup>t</sup>Bu), Glu,  
 20 Glu(O<sup>t</sup>Bu), Hyp(O<sup>t</sup>Bu), Thr(O<sup>t</sup>Bu), Asp(OBzl), Glu(OBzl),  
 Hyp(OBzl), Thr(OBzl), cyclohexylglycine,  
 cyclohexylalanine, cyclohexylglycine,  
 cyclopropylglycine, t-butylglycine, phenylglycine, and  
 3,3-diphenylalanine;

25

R<sup>1</sup> is -CH<sub>2</sub>CH<sub>2</sub>-R<sup>1a</sup> or -CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>-R<sup>1a</sup>;

R<sup>1a</sup> is selected from the group: phenyl, 2-naphthyl, 2-  
 methylphenyl, 3-methylphenyl, 4-methylphenyl, 4-(1,1'-  
 30 biphenyl)-, 2,5-dimethylphenyl, 2,4-dimethylphenyl,  
 3-CF<sub>3</sub>-phenyl, 4-CF<sub>3</sub>-phenyl, 2-F-phenyl, 3-F-phenyl,  
 4-F-phenyl, 4-Cl-phenyl, 4-Br-phenyl, 4-phenoxyphenyl,  
 4-isopropylphenyl, 4-cyclohexylphenyl, 4-tBu-phenyl,  
 4-methoxyphenyl, 2,6-diF-phenyl, 4-hydroxy-phenyl,  
 35 (4-methoxyphenoxy)phenyl, methyl, ethyl, propyl,  
 i-propyl, n-butyl, i-butyl, and cyclobutyl;

5

$R^X$  is H or benzoxy;

$R^2$  is H;

10  $R^3$  is H,  $-C(=O)R^{11}$  or acetyl;

$R^{11}$  is 5-6 membered heterocyclic ring system consisting of carbon atoms and 1-4 heteroatoms selected from the group: O, S, and N; optionally saturated, partially unsaturated or unsaturated; said 5-6 membered heterocyclic ring system is substituted with 0-2  $R^{11b}$ ; and

15  $R^{11b}$  is  $-NO_2$ ,  $-NH_2$ ,  $-SO_3H$ ,  $-SO_2CH_3$ ,  $-CO_2H$ ,  $-CF_3$ ,  $-OH$ ,  $-SH$ ,  
 20  $-OCF_3$ , Cl, Br, F, methyl, ethyl, propyl, butyl,  $-OCH_3$ , or  $-OCH_2CH_3$ .

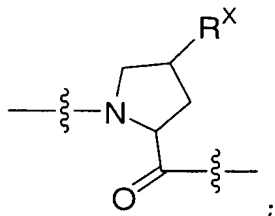
9. A compound of Claim 7, or a stereoisomer or a pharmaceutically acceptable salt form or prodrug thereof, wherein:

25 W is pinanediol boronic ester;

A is  $A^2-A^3-A^4$ ,  $A^2-A^3-A^4-A^5$ , or  $A^2-A^3-A^4-A^5-A^6$ ;

30

$A^2$  is Pro, Leu, Asp, Abu, Val, cyclohexylalanine, or



35  $A^3$  is Val, Glu, Ile, Thr, cyclohexylglycine, or cyclohexylalanine;

5

A<sup>4</sup> is Val, Ile, Leu, cyclohexylglycine, cyclopropylglycine, t-butylglycine, phenylglycine, or 3,3-diphenylalanine;

A<sup>5</sup> is Asp, Glu, Val, Ile, t-butylglycine or Gla;

10

A<sup>6</sup> is Asp or Glu;

R<sup>1</sup> is -CH<sub>2</sub>CH<sub>2</sub>-R<sup>1a</sup> or -CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>-R<sup>1a</sup>;

15

R<sup>1a</sup> is selected from the group: phenyl, 2-naphthyl, 2-methylphenyl, 3-methylphenyl, 4-methylphenyl, 4-(1,1'-biphenyl)-, 2,5-dimethylphenyl, 2,4-dimethylphenyl, 3-CF<sub>3</sub>-phenyl, 4-CF<sub>3</sub>-phenyl, 2-F-phenyl, 3-F-phenyl, 4-F-phenyl, 4-Cl-phenyl, 4-Br-phenyl, 4-phenoxyphenyl, 4-isopropylphenyl, 4-cyclohexylphenyl, 4-tBu-phenyl, 4-methoxyphenyl, 2,6-diF-phenyl, 4-hydroxy-phenyl, (4-methoxyphenoxy)phenyl, methyl, ethyl, propyl, i-propyl, n-butyl, i-butyl, and cyclobutyl;

20

25 R<sup>x</sup> is H or -(CH<sub>2</sub>)<sub>m</sub>-R<sup>16</sup>-(CH<sub>2</sub>)<sub>n</sub>-R<sup>12</sup>;

m and n are independently selected from 0 or 1;

R<sup>2</sup> is H or methyl;

30

R<sup>3</sup> is H, methyl, ethyl propyl, butyl, phenyl, benzyl, -C(=O)R<sup>11</sup>, -CO<sub>2</sub>R<sup>11</sup>, -C(=O)NHR<sup>11</sup> or acetyl;

R<sup>11</sup> is C<sub>1</sub>-C<sub>4</sub> alkyl substituted with 0-1 R<sup>11a</sup>,

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phenyl substituted with 0-2 R<sup>11b</sup>, or 5-6 membered heterocyclic ring system consisting of carbon atoms and 1-4 heteroatoms selected from the group: O, S, and N; optionally saturated, partially unsaturated or unsaturated; said 5-6 membered

5 heterocyclic ring system is substituted with 0-2  
R<sup>11b</sup>;

R<sup>11a</sup> is methyl, ethyl propyl, butyl, F, Cl, Br, Cl, -OH,  
-OCH<sub>3</sub>, -SH, -SCH<sub>3</sub>, -NH<sub>2</sub>, -NHCH<sub>3</sub>, -N(CH<sub>3</sub>)<sub>2</sub>, phenyl, or a  
10 5-6 membered heterocyclic ring system containing 1, 2  
or 3 heteroatoms selected from nitrogen, oxygen and  
sulfur;

R<sup>11b</sup> is -NO<sub>2</sub>, -NH<sub>2</sub>, -SO<sub>3</sub>H, -SO<sub>2</sub>CH<sub>3</sub>, -CO<sub>2</sub>H, -CF<sub>3</sub>, -OH, -SH,  
15 -OCF<sub>3</sub>, Cl, Br, I, F, =O, methyl, ethyl, propyl, butyl,  
-OCH<sub>3</sub>, -OCH<sub>2</sub>CH<sub>3</sub>, -SCH<sub>3</sub>, -SCH<sub>2</sub>CH<sub>3</sub>, phenyl, or benzyl;

R<sup>12</sup> is selected from the group: H;  
C<sub>1</sub>-C<sub>4</sub> alkyl substituted with 0-2 R<sup>12a</sup>;  
20 6-10 member aryl substituted with 0-3 R<sup>12a</sup>; and  
5-10 membered heterocyclic ring system consisting of  
carbon atoms and 1-4 heteroatoms selected from the  
group: O, S, and N; optionally saturated, partially  
unsaturated or unsaturated; said 5-10 membered  
25 heterocyclic ring system is substituted with 0-2  
R<sup>12a</sup>;

R<sup>12a</sup> is independently selected from the group: -NO<sub>2</sub>;  
halogen; haloalkyl; carboxyl; carboxy(lower alkyl);  
30 -OR<sup>14</sup>; -SR<sup>14</sup>; -NR<sup>14</sup>R<sup>15</sup>; -C(=O)NR<sup>14</sup>R<sup>15</sup>; -NR<sup>14</sup>C(=O)R<sup>15</sup>;  
C<sub>1</sub>-C<sub>4</sub> alkyl; phenyl; and  
5-6 membered heterocyclic ring system consisting of  
carbon atoms and 1-4 heteroatoms selected from the  
group: O, S, and N; optionally saturated, partially  
35 unsaturated or unsaturated;

R<sup>14</sup> and R<sup>15</sup> are independently selected from H, methyl, or  
ethyl; and

40 R<sup>16</sup> is a bond, -O- or -S-.

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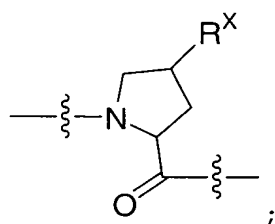
10. A compound of Claim 9, or a stereoisomer or a pharmaceutically acceptable salt form or prodrug thereof, wherein:

10 W is pinanediol boronic ester;

A is  $A^2-A^3-A^4$ ,  $A^2-A^3-A^4-A^5$ , or  $A^2-A^3-A^4-A^5-A^6$ ;

$A^2$  is Pro, Leu, Asp, Abu, Val, cyclohexylalanine, or

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$A^3$  is Val, Glu, Ile, Thr, cyclohexylglycine, or cyclohexylalanine;

20

$A^4$  is Val, Ile, Leu, cyclohexylglycine, cyclopropylglycine, t-butylglycine, phenylglycine, or 3,3-diphenylalanine;

$A^5$  is Asp, Glu, Val, Ile, t-butylglycine or Gla;

25

$A^6$  is Asp or Glu;

$R^1$  is  $-CH_2CH_2-R^{1a}$  or  $-CH_2CH_2CH_2CH_2-R^{1a}$ ;

30  $R^{1a}$  is selected from the group: phenyl, 2-naphthyl, 2-methylphenyl, 3-methylphenyl, 4-methylphenyl, 4-(1,1'-biphenyl)-, 2,5-dimethylphenyl, 2,4-dimethylphenyl, 3-CF<sub>3</sub>-phenyl, 4-CF<sub>3</sub>-phenyl, 2-F-phenyl, 3-F-phenyl, 4-F-phenyl, 4-Cl-phenyl, 4-Br-phenyl, 4-phenoxyphenyl, 35 4-isopropylphenyl, 4-cyclohexylphenyl, 4-tBu-phenyl, 4-methoxyphenyl, 2,6-diF-phenyl, 4-hydroxy-phenyl,

5 (4-methoxyphenoxy)phenyl, methyl, ethyl, propyl,  
i-propyl, n-butyl, i-butyl, and cyclobutyl;

R<sup>x</sup> is H or benzoxy;

10 R<sup>2</sup> is H;

R<sup>3</sup> is H, -C(=O)R<sup>11</sup> or acetyl;

15 R<sup>11</sup> is 5-6 membered heterocyclic ring system consisting of  
carbon atoms and 1-4 heteroatoms selected from the  
group: O, S, and N; optionally saturated, partially  
unsaturated or unsaturated; said 5-6 membered  
heterocyclic ring system is substituted with 0-2 R<sup>11b</sup>;  
and

20

R<sup>11b</sup> is -NO<sub>2</sub>, -NH<sub>2</sub>, -SO<sub>3</sub>H, -SO<sub>2</sub>CH<sub>3</sub>, -CO<sub>2</sub>H, -CF<sub>3</sub>, -OH, -SH,  
-OCF<sub>3</sub>, Cl, Br, F, methyl, ethyl, propyl, butyl, -OCH<sub>3</sub>,  
or -OCH<sub>2</sub>CH<sub>3</sub>.

25 11. A compound of Claim 1, or a stereoisomer or a  
pharmaceutically acceptable salt form or prodrug  
thereof, selected from:

30 H-Asp-Glu-Val-Val-Pro-(1R)-1-amino-3-phenylpropylboronic  
acid (+)-pinanediol ester;

H-Asp-Glu-Val-Val-Pro-(1R)-1-amino-4-phenylbutylboronic  
acid (+)-pinanediol ester;

35 H-Asp-Glu-Val-Val-Pro-(1R)-1-amino-5-phenylpentylboronic  
acid (+)-pinanediol ester;

H-Asp-Glu-Val-Val-Pro-(1R)-1-amino-3-(2-  
naphthyl)propylboronic acid (+)-pinanediol ester;

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- 5 H-Asp-Glu-Val-Val-Pro-(1R)-1-amino-3-(2-methyl)phenylpropylboronic acid (+)-pinanediol ester;
- H-Asp-Glu-Val-Val-Pro-(1R)-1-amino-3-(3-methyl)phenylpropylboronic acid (+)-pinanediol ester;
- 10 H-Asp-Glu-Val-Val-Pro-(1R)-1-amino-3-(4-methyl)phenylpropylboronic acid (+)-pinanediol ester;
- H-Asp-Glu-Val-Val-Pro-(1R)-1-amino-3-(1,1'-biphenyl)-4-ylpropylboronic acid (+)-pinanediol ester;
- 15 H-Asp-Glu-Val-Val-Pro-(1R)-1-amino-3-(2,5-dimethyl)phenylpropylboronic acid (+)-pinanediol ester;
- 20 H-Asp-Glu-Val-Val-Pro-(1R)-1-amino-3-(2,4-dimethyl)phenylpropylboronic acid (+)-pinanediol ester;
- H-Asp-Glu-Val-Val-Pro-(1R)-1-amino-3-(4-trifluoromethyl)phenylpropylboronic acid (+)-pinanediol ester;
- 25 H-Asp-Glu-Val-Val-Pro-(1R)-1-amino-3-(3-trifluoromethyl)phenylpropylboronic acid (+)-pinanediol ester;
- 30 H-Asp-Glu-Val-Val-Pro-(1R)-1-amino-3-(4-fluoro)phenylpropylboronic acid (+)-pinanediol ester;
- H-Asp-Glu-Val-Val-Pro-(1R)-1-amino-3-(4-phenoxy)phenylpropylboronic acid (+)-pinanediol ester;
- 35 H-Asp-Glu-Val-Val-Pro-(1R)-1-amino-3-(4-isopropyl)phenylpropylboronic acid (+)-pinanediol ester;

- 5 H-Asp-Glu-Val-Val-Pro-(1*R*)-1-amino-3-(4-cyclohexyl)phenylpropylboronic acid (+)-pinanediol ester;
- 10 H-Asp-Glu-Val-Val-Pro-(1*R*)-1-amino-3-(4-*tert*-butyl)phenylpropylboronic acid (+)-pinanediol ester;
- H-Asp-Glu-Val-Val-Pro-(1*R*)-1-amino-3-(4-methoxy)phenylpropylboronic acid (+)-pinanediol ester;
- 15 H-Asp-Glu-Val-Val-Pro-(1*R*)-1-amino-3-(4-chloro)phenylpropylboronic acid (+)-pinanediol ester;
- H-Asp-Glu-Val-Val-Pro-(1*R*)-1-amino-3-(4-bromo)phenylpropylboronic acid (+)-pinanediol ester;
- 20 H-Asp-Glu-Val-Val-Pro-(1*R*)-1-amino-3-(2-fluoro)phenylpropylboronic acid (+)-pinanediol ester;
- H-Asp-Glu-Val-Val-Pro-(1*R*)-1-amino-3-(3-fluoro)phenylpropylboronic acid (+)-pinanediol ester;
- 25 H-Asp-Glu-Val-Val-Pro-(1*R*)-1-amino-3-(2,6-difluoro)phenylpropylboronic acid (+)-pinanediol ester;
- 30 H-Asp-Glu-Val-Val-Pro-(1*R*)-1-amino-3-(4-hydroxy)phenylpropylboronic acid (+)-pinanediol ester;
- H-Asp-Glu-Val-Val-Pro-(1*R*)-1-aminoheptylboronic acid (+)-pinanediol ester;
- 35 H-Asp-Glu-Val-Val-Pro-(1*R*)-1-amino-5-methylhexylboronic acid (+)-pinanediol ester;
- H-Asp-Glu-Val-Val-Pro-(1*R*)-1-aminoheptylboronic acid (+)-pinanediol ester;
- 40



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5 H-Asp-Glu-Val-Val-Pro-(1R)-1-amino-4-cyclobutylbutylboronic acid (+)-pinanediol ester; and

H-Asp-Glu-Val-Val-Pro-(1R)-1-amino-5-ethylheptylboronic acid (+)-pinanediol ester.

10

12. A compound of Claim 1 selected from:

Ac-Val-Pro-(1R)-1-amino-3-phenylpropylboronic acid (+)-pinanediol ester;

15

Ac-Val-Pro-(1R)-1-amino-3-(4-trifluoromethyl)phenylpropylboronic acid (+)-pinanediol ester;

Ac-Val-Pro-(1R)-1-amino-3-(4-phenoxy)phenylpropylboronic acid (+)-pinanediol ester;

20

Ac-Val-Pro-(1R)-1-amino-3-(4-hydroxy)phenylpropylboronic acid (+)-pinanediol ester;

Ac-Val-Pro-(1R)-1-amino-3-(4-(4-methoxyphenoxy)phenyl)propylboronic acid (+)-pinanediol ester;

25

Ac-Val-Pro-(1R)-1-amino-3-(4-(4-methylphenoxy)phenyl)propylboronic acid (+)-pinanediol ester; and

30

(2-pyrazinecarbonyl)-Val-Val-Hyp(OBn)-(1R)-1-amino-3-(4-trifluoromethyl)phenylpropylboronic acid (+)-pinanediol ester.

35 13. A pharmaceutical composition comprising a pharmaceutically acceptable carrier and a therapeutically effective amount of a compound of one of Claim 1 or a pharmaceutically acceptable salt form or prodrug thereof.

40 14. A method of treating a viral infection which comprises administering to a host in need of such treatment a

5 therapeutically effective amount of a compound of one of  
Claim 1 or a pharmaceutically acceptable salt form or  
prodrug thereof.

15. A method of treating HCV infection which comprises  
10 administering to a host in need of such treatment a  
therapeutically effective amount of a compound of one of  
Claim 1 or a pharmaceutically acceptable salt form or  
prodrug thereof.